California Public Utilities Commission

Report to the Governor

ENERGY EFFICIENCY PROGRAMS IN SUPPORT OF THE GREEN BUILDING INITIATIVE

Biennial Report Required by Executive Order S-20-04

Prepared by the California Public Utilities Commission (CPUC) Energy Division

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I. Executive Summary

This is the second report[1] issued in response to the Governor's Executive Order S-20-04, the Green Building Initiative (GBI).[2] The Executive Order urged the California Public Utility Commission (CPUC or Commission) to apply its authority over the Investor Owned Utility's (IOUs)[3] energy efficiency programs to help achieve the GBI's energy reduction goals and submit a biennial report to the Governor on progress toward meeting these goals. The CPUC's actions to advance the GBI goals and the energy savings accomplishments from the IOUs' energy efficiency programs since 2004[4] are described in this report.

Many specific CPUC activities in support of the GBI have occurred since the first Report to the Governor was submitted in 2005. These actions facilitate the IOU achievement of their CPUC mandated energy savings goals which are parallel with GBI goals. Two major Decisions approved by the Commission in 2007 will have the greatest effect on savings achievements in IOU energy efficiency programs. Decision (D.) 07-10-032, issued on October 18, 2007, provides sweeping direction to the IOUs to prepare a single, comprehensive statewide long-term energy efficiency plan, which among other strategic planning elements, must include three programmatic initiatives:

- All new residential construction in California will be zero net energy by 2020;
- All new commercial construction in California will be zero net energy by 2030; and
- Heating, Ventilation, and Air Conditioning industry will be reshaped to ensure optimal equipment performance;

[1] The first report to the Governor was submitted October 2005 and titled, "Energy Efficiency Programs in Support of the Green Building Initiative: Report to the Governor," available at http://www.cpuc.ca.gov/word_pdf/REPORT/50121.pdf.
[2] Available at http://gov.ca.gov/index.php?/executive-order/3360/.
[3] "Utilities" or "IOUs" refer to Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas and Electric Company (SDG&E), and Southern California Gas Company (SoCalGas).
[4] The CPUC requires IOUs to generate savings through various programs. These programs are voluntary for the customer to participate in and often include an incentive for participation.

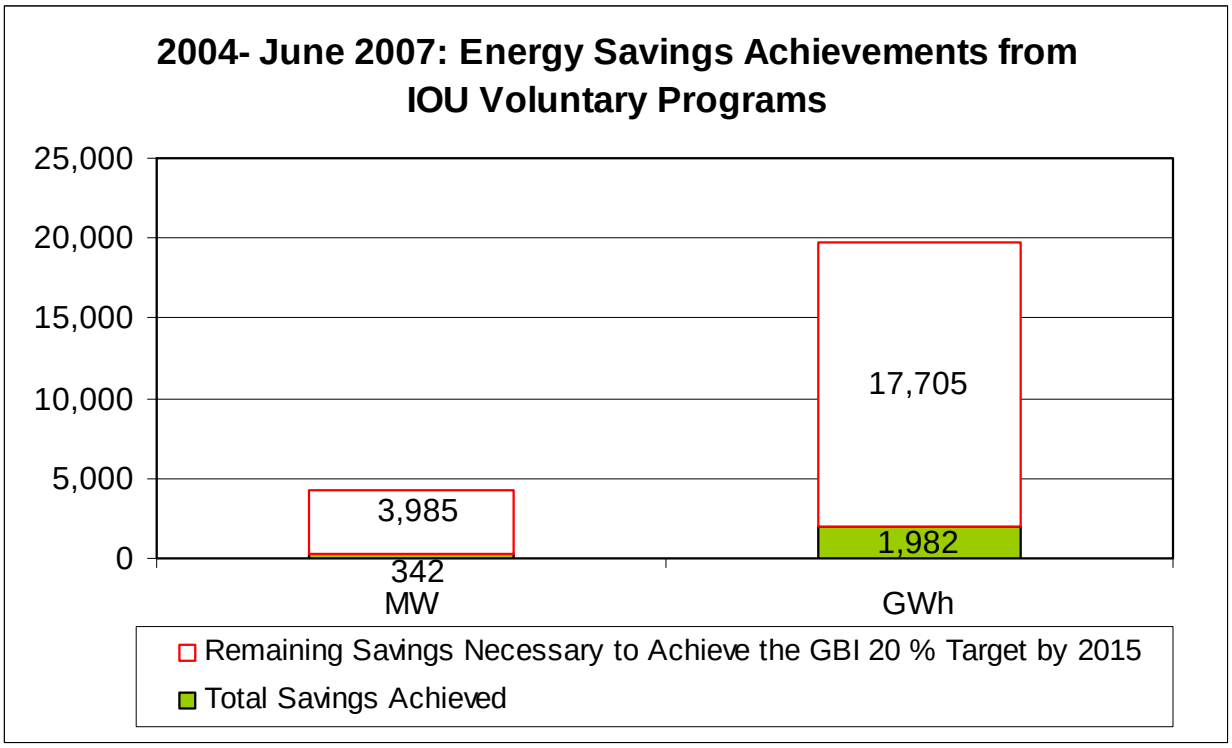
In addition, the CPUC established a new system of incentives and penalties through D. 07-09-043 to drive investor-owned utilities above and beyond California's aggressive energy savings goals[5].

The primary purpose of the IOU energy efficiency programs is to meet the aggressive energy savings goals set by the Commission. The Commission has overseen these programs for decades, and many of the 2004-2005 energy efficiency programs in effect when the GBI was issued already contributed to the goals identified in the GBI. In the current 2006-2008 program cycle, the IOU's are implementing a strong set of programs targeted at the commercial and institutional sector which the GBI encompasses. These programs are currently achieving savings through a combination of outreach programs (to inform building owners and operators of opportunities to improve energy efficiency) and a diverse mix of program delivery methods including rebates and incentives to offset the costs of investing in energy efficient technologies.

In 2007, the CPUC required a new and more detailed reporting format for GBI relevant achievements of the IOUs. Each IOU tracks and reports quarterly on the achievements relevant to the GBI by market segment, specifically; state buildings, commercial buildings (private sector), and other public buildings (federal and local government) among other reporting requirements. The data reported by the IOUs for the period between 2004 and June 2007 demonstrate that while there are significant energy and greenhouse gas savings, it is clear that significant additional sector-wide savings are necessary.

[5] September 25, 2007, "Interim Opinion on Phase 1 Issues: Shareholder Risk/Reward Incentive Mechanism for Energy Efficiency Programs".
http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/73172.pdf

Figure 1: Total Energy Savings Achieved Toward GBI 20% Goal[6]



Based on the utilities' reported information, their energy efficiency programs have achieved approximately 9 to 11% (i.e., 342 MW, 1,982 GWh, and 24 million therms[7]) of the GBI 20% energy reduction target for all segments of the commercial sector from 2004 through June 2007 with a total incentive expenditure of over $225 million.

The private commercial building segment shows the most progress towards GBI goals, where the largest energy savings have been achieved. It is also where IOUs forecast the largest savings to occur, setting a demand reduction target of 680 MW for 2006 through 2008. The new reporting format uncovers a severe lack of participation in IOU efficiency programs by State Buildings. Although progress toward achievement of the State Building segment target is apparent, State Building electricity and gas savings lag well behind those of the private Commercial Building segment or even the Federal and Local government buildings.

[6] Data presented in Figure 1 is the same as in Table 1. See Table 1 for citation.
[7] No official numerical therm target was established besides a 20% reduction from the 2003 baseline.

In the 2006-2008 program cycle, State Buildings have reduced demand by 0.85 MW – less than 4% of the IOU three year target. State buildings have also achieved gas savings of less than 1% of the IOU three year target. To meet the GBI required 20% reduction in grid supplied energy, State Buildings will have to reduce their demand by a total of 120 MW by 2015. To succeed, this segment of the Commercial sector has just over half the time period remaining in the GBI to achieve over 95% of the savings.

Achievement of the considerable reductions in energy use for State and Commercial Buildings envisioned by the GBI and necessary to meet the challenges of AB 32 will require addressing key barriers that hinder more widespread adoption of energy efficiency measures. The CPUC continues its commitment to achieving the GBI goals and has directed the utilities to implement certain programs to overcome some of the challenges to program participation particularly by institutional customers.

II. CPUC Acts to Support GBI Goals

On July 27, 2004, Governor Schwarzenegger signed Executive Order S-20-04, establishing the Green Building Initiative (GBI). The Executive Order specifically urged the CPUC to:

> apply its energy efficiency authority to support a campaign to inform building owners and operators about the compelling economic benefits of energy efficiency measures; improve commercial building efficiency programs to help achieve [the goal of reducing grid-based energy use by 20% by 2015]; and submit a biennial report to the Governor commencing in September 2005, on progress toward meeting these goals.

Section 2.1.3 of the Green Building Action Plan, which accompanied the Executive Order, also directed the CPUC to describe how the energy efficiency programs approved by the CPUC are facilitating the goals identified therein, specifically to:

> produce greater measured efficiency gains per dollar of program expenditure; encourage increasing levels of efficiency investments in longer terms payback measures than those now typically occurring, including the use of new or improved incentive programs, (such as utility bill discounts, incentives based on measured performance, and “on bill” financing); [and] include building commissioning and advanced metering practices in programs wherever appropriate.

The GBI declares that all state buildings are required to reduce their grid-based energy purchases 20 percent by 2015 over a 2003 baseline. The GBI encourages all commercial buildings to also meet this target.

The CPUC’s first GBI Report to the Governor identified policy actions taken by the CPUC to facilitate achievement of the Governor’s goals. Highlights of specific steps the CPUC has taken since 2004 in addition to other legislative actions to facilitate achievement of the goals set forth in the GBI are described below:

2004

- Issued Assigned Commissioner Ruling on December 29, 2004, in the Energy Efficiency proceeding to explore the extent to which the energy efficiency programs authorized and funded in 2004-2005 could be used to support the goals of the GBI, and seeking comments regarding how the CPUC should alter program designs and funding to implement the GBI in the future.[8]

2005

- Adopted the Energy Action Plan II (*EAP II*) affirming the CPUC's commitment to taking the steps identified in the Green Building Action Plan[9].
- Directed utilities to consider the GBI in their energy efficiency program portfolios for the 2006-2008 program cycle and approved over $2 billion in ratepayer funding for the program cycle in D.05-09-043, of which over $600 million are for programs that the utilities identified as contributing to GBI goals.
- Submitted First Report to the Governor on GBI achievements.

[8] http://docs.cpuc.ca.gov/PUBLISHED/RULINGS/42569.htm

[9] EAP I and II were adopted in May 2003 and August 2005 respectively. EAP I established a loading order that ranked energy efficiency as the resource of first choice, ahead of all other resource options. It further identified reduction of energy use per capita as one of six actions of critical importance. In response to this goal, on September 23, 2004, the CPUC issued D.04-09-060, setting *annual and cumulative goals for energy savings through the year 2013* for the four largest investor owned utilities More recently, EAP II identified 15 action items to facilitate deployment of all cost-effective energy efficiency measures in the state. Energy Action Plan II is available at www.cpuc.ca.gov/PUBLISHED/REPORT/51604.htm.
The EAP II illustrated the Commission's commitment to GBI goals in action #6, which states that the CPUC will:

> Implement actions outlined in the Governor's Green Buildings Action Plan to improve building performance and reduce grid-based electrical energy purchases in all State and commercial buildings by 20 percent by 2015.

2006[10]

- Directed IOUs to report on GBI achievements quarterly and to post those reports on a publicly accessible website.[11]
- Published Assigned Commissioner Ruling (ACR) and Scoping Memo requiring IOUs to submit their best estimates of forecast savings in state-owned and commercial buildings over the 2006-2008 energy efficiency program cycle.[12]
- Legislative: AB 32, the Global Warming Solutions Act of 2006.
- Legislative: AB 2021, which requires the California Energy Commission to establish energy efficiency goals for publicly owned utilities in line with those already set for investor owned utilities.

[10] In 2006 the CPUC enabled the goals of the GBI through these other demand side achievements. The CPUC:

-Authorized PG&E's Advanced Meters Initative (AMI) project. The deployment of AMI will enable all customers in PG&E's territory to participate in demand response programs or dynamic pricing, which will reduce peak load energy usage.

-Authorized three-year budgets (2006-2009) for IOU demand response programs for commercial and industrial customers for the purpose of expanding participation in demand response to achieve the statewide goal of five percent of system peak demand.

-Developed the $2.2 billion California Solar Initiative through D. 06-08-028. The CSI directs IOUs to achieve respective MW targets of distributed solar generation by 2017. The total CPUC target is 1940 MW by 2017.

-Implemented AB 1969 (2006 Yee) through the adoption of D.07-07-029 to establish a feed-in tariff for small distributed generation renewable energy production facilities.

[11] http://eega2006.cpuc.ca.gov/Default.aspx

[12] http://docs.cpuc.ca.gov/PUBLISHED/RULINGS/56598.htm

2007[13]

- Collected regularly provided data reports on the GBI-related savings per quarter, year, and program cycle classified by segment and end use.
- Adjusted and improved IOUs' energy efficiency reporting process of GBI-related savings to facilitate a cross-program reporting method that allows for all CPUC-managed DSM achievements relating to GBI (energy efficiency, distributed renewables, demand response) to be aggregated for easy analysis.
- Established a new system of incentives and penalties through D. 07-09-043 to drive investor-owned utilities above and beyond California's aggressive energy savings goals.[14]
    - The new program provides utility shareholders with incentives of sufficient level to ensure that they direct utility managers to view energy efficiency as a core part of the utility's regulated operations that can generate meaningful earnings. This new framework ensures that program savings on which incentives are based are real and verified and imposes penalties for substandard utility savings performance.
    - Earnings to shareholders accrue only when a utility produces positive net benefits (energy savings minus program costs) for ratepayers. The shareholder "reward" side of the incentive mechanism is balanced by the risk of financial penalties for substandard performance in achieving the CPUC's per kilowatt, kilowatt-hour, and therm savings goals. Programs falling under the goals of the

[13] In 2007 the CPUC enabled the goals of the GBI through the following other demand side achievements. The CPUC:

-Authorized SDG&E's Advanced Meters Initiative (AMI) project. The deployment of AMI will enable all customers in SDG&E's territory to participate in demand response programs or dynamic pricing, which will reduce peak load energy usage.

-Initiated a formal rulemaking that will develop protocols for the purpose of accurately measuring load impacts from demand response programs and determining the cost-effectiveness of demand response programs. -Initiated a formal process in PG&E's General Rate Case on how to design rates for the purpose of achieving demand response.

-Launched the California Solar Initiative. Program Administrators reported 160 MW of active requests for incentives on new solar installations as of September 18, 2007, as a result of the program.

[14] September 25, 2007, "Interim Opinion on Phase 1 Issues: Shareholder Risk/Reward Incentive Mechanism for Energy Efficiency Programs".
http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/73172.pdf

Governor's Green Building Initiative will benefit through increased program attention to tap the savings potential within commercial buildings.

- Issued D.07-10-032[15] directing multiple actions that speak to barriers identified in past GBI documents including:
  - Requiring utilities to prepare a single, comprehensive statewide long-term energy efficiency plan, which among other strategic planning elements, must include three programmatic initiatives:
    - All new residential construction in California will be zero net energy by 2020;
    - All new commercial construction in California will be zero net energy by 2030; and
    - Heating, Ventilation, and Air Conditioning industry will be reshaped to ensure optimal equipment performance.
  - Establishing a new collaborative process to include key business and consumer groups and governmental organizations in producing the next generation of California utility energy efficiency programs for 2009-2011, which will be the first step in fulfilling the long-term strategic energy efficiency plan.
  - Requiring utilities to initiate "on-bill" financing to all commercial and institutional customers to reduce the barrier of large up front costs.
  - Directing the utilities to reach out to local governments to create innovative energy efficiency partnerships.
- Legislative: AB 1109, which requires the California Energy Commission to set performance standards designed to improve the efficiency of indoor general purpose lighting by 50 percent over the next 10 years, with significant improvement goals for commercial and outdoor lighting as well
- Legislative: AB 1470, which authorizes the CPUC to create a 10-year/$250 million program to install 200,000 solar hot water heaters over the next decade, displacing demand for natural gas. The authorization is contingent on the cost effectiveness of a $3 million solar hot water heater pilot program in San Diego.

[15] October 18, 2007 "Interim Opinion on Issues Relating to Future Savings Goals and Program Planning for 2009-2011 Energy Efficiency and Beyond"
http://www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/74107.htm

III. Utility Energy Efficiency Programs Advance GBI Goals

The GBI represents an important step in state policy action and recognizes the interactions between resource adequacy, environmental sustainability, and economic efficiency. By establishing firm targets for state buildings and further encouraging energy efficiency improvements in the commercial building sector, California exhibits strong leadership to neighboring states and the rest of the country. The GBI goals are consistent with those of the energy efficiency programs developed by the utilities under CPUC direction.

IOU's are mandated to design a suite of energy efficiency programs to achieve the CPUC's aggressive cumulative energy savings goals as defined by D.04-09-060.[16] These programs operate within a program cycle lasting three years. Meeting the CPUC's energy efficiency goals is the primary objective of the IOU programs. IOUs are given the authority to design programs in any manner that best achieves the CPUC's goals. As a result, programs may focus more or less in certain segments of the economy. Customer participation in the IOU energy efficiency programs is voluntary, and the incentives and other benefits of participation are the marketing hook to the customer. A significant portion of the entire portfolio of voluntary programs across all IOU's targets the commercial sector. The GBI-relevant savings data presented in this report represent the entire fleet of commercial sector IOU programs.

Many of the 2004-2005 energy efficiency programs in effect when the GBI was issued already contributed to the goals identified in the GBI. A strong set of the 2006-2008 programs are targeted at the commercial and institutional sector. These programs are currently achieving savings through a combination of outreach programs (to inform building owners and operators of opportunities to improve energy efficiency) and a

[16] September 23, 2004, "Interim Opinion: Energy Savings Goals for Program Year 2006 and Beyond". http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/40212.pdf

diverse mix of program delivery methods including rebates and incentives to offset the costs of investing in energy efficient technologies.

In 2005, the first GBI Report to the Governor was only able to provide information about IOU projected savings from both their 2004-2005 as well as their 2006-2008 energy efficiency program portfolios. The data available on IOU energy efficiency programs is now much more robust: the IOUs' 2006-2008 energy efficiency program cycle is underway; half of the 2006-2008 periodic reports from the IOUs to the CPUC have been submitted; and IOU reported savings from 2004-2005 are available and being verified.

In 2007, the Commission improved IOU reporting on GBI progress using a new reporting format that allows for improved analysis of GBI related savings. These reports are posted on a publicly accessible website[17] in a downloadable format. The new format recognizes that within the commercial sector a variety of market segment players may participate, such as private commercial actors or public commercial actors. These actors each have access to IOU energy efficiency programs. However, because each IOU may serve each market segment differently, achievements in each segment across IOU service territories also differs. The new IOU quarterly reports track the achievements relevant to the GBI by market segment, specifically; state buildings, commercial buildings (private sector), and other public buildings (federal and local government) and compare them to their forecasted savings potential. Presented below are the actual reported savings from the utilities' energy efficiency programs since 2004.

Savings Analysis from IOU Energy Efficiency Program Cycles

The data representing the actual quantity of energy efficiency generated by the IOU commercial sector programs undergo a process of refinement over the course of each program cycle. Initially, IOUs file their proposed portfolio of programs and project the savings achievable from each program and for the entire portfolio. Typically this indicates that their program offerings will exceed the annual and cumulative CPUC

[17] Energy Efficiency Groupware Application (http://eega2006.cpuc.ca.gov)

goals set for that program cycle. Once approved, programs begin operation, achieve actual savings and report to the CPUC monthly, quarterly, and annually until the completion of the program cycle. These reported figures are referred to as "ex-ante" as they use some savings assumptions per measure installed for reporting purposes. Finally, the CPUC requires a rigorous measurement and verification of savings and evaluation of the largest programs by CPUC hired independent contractors. This process allows for actual savings to be determined for certain measures and verifies that savings that were reported were actually installed. This "true-up" process adjusts the savings achievements reported by IOUs and results in the "ex-post" savings totals.

At the time of this report, IOU "ex-ante" reported savings are available for all of 2004, 2005, 2006, and the first half of 2007. A complete set of "ex-post" savings data from 2004-2005 are not yet available and projections of savings for the 2009-2011 program cycle have not yet been made. The 2009 GBI Report to the Governor will include ex-post savings figures from 2004 and 2005, reported savings for all of 2006 through 2008, and projections of savings for 2009 through 2011.

IOU Achievements Supporting the GBI: Three Levels of Comparison

Energy efficiency achievements made in support of the GBI goals can be quantified and compared to the representative level of savings required to meet the GBI 20% reduction target. This comparison is illustrated in Table 1 of this report and represents the highest and least detailed degree of comparison.

As described earlier, the primary objective of IOU energy efficiency programs is to meet the CPUC mandated energy efficiency savings goals. At the beginning of each program cycle the IOUs forecast the level of savings they intend to achieve through each program, and organize the portfolio by sector. Comparing the level of savings forecasted to those actually achieved in the commercial sector represents a more detailed analysis. This level of comparison is illustrated in Table 2 of this report.

Finally, a detailed comparison of the current 2006-2008 program cycle of forecasted savings to reported savings is made within each segment of the commercial sector; state government buildings, federal and local government buildings, and private commercial buildings. The CPUC requires IOUs to track their GBI achievements by segment to determine where program delivery mechanisms are successful and which are not allowing for mid-cycle changes in delivery strategies. This represents the most detailed level of analysis and is illustrated in Table 3. An additional comparison of achievements and targets in state buildings only is presented in Table 4. For readers interested in doing additional analysis, all data to date is provided in Attachment C and includes reported savings stratified by NAICS code and by end use.

IOU Program Accomplishments vs. GBI Targets for Commercial Sector

The GBI Technical Back-up document[18] quantifies the MW and GWh reduction level necessary to satisfy a 20% reduction in the entire commercial sector's[19] energy purchases from the grid. This numerical target represents 20% of the 2003 commercial sector baseline energy use in IOU service territories. Table 1 presents the achievements to date from IOU energy efficiency programs compared to the representative numerical target. Neither the Executive Order nor its companion documents the Green Building Action Plan and the Technical Back-Up document contain milestone targets for savings in commercial buildings during the 10 year initiative. It is evident from the data that greater savings are necessary. Nearly one half of the ten year initiative has passed while only around 10% of the savings have been achieved.

[18] September, 2004, "Green Building Action Plan Back-Up Technical Document – Rationale, Specific Actions, and Timeline".
http://www.energy.ca.gov/greenbuilding/ab2160/documents/resource_docs/GBI_RATIONALE_ACTIONS_TIMELINE_2004-09.PDF

[19] Commercial sector as used in this report includes privately-owned commercial buildings, state buildings, and other public buildings.

Table 1: Percent of GBI 20% reduction target achieved by IOU voluntary programs (2004-2008*)

	Expenditures (Reported)	MW	GWh	Million Therms
Total Commercial Sector	$225,245,601	342	1,982	24
GBI 20 % Target by 2015		3,985	17,705	NA
% Completion of Target via IOU voluntary programs		9%	11%	NA

* **Reported figures for the 2006-08 Program Cycle only include reported accomplishments from 2006 through Q2 (June) 2007.** Reported expenditures include only incentives provided to participants. Data for this table was taken from multiple sources. The expenditures and total energy savings was gathered from the Q2 IOU Reports submitted to the Energy Efficiency Groupware Application (http://eega2006.cpuc.ca.gov) included here as Attachment C. GBI 20% Target was taken from the "Revised Joint Utility Report Comparing Best Estimates of Forecasted Savings Over the 2006-2008 Energy Efficiency Program Cycle" submitted July 6, 2006, and included here as Attachment B. % Completion of Target was calculated from these inputs.

However, the long term nature of the GBI is designed to allow for the appropriate decision makers within each commercial segment to schedule and plan across multiple budget cycles for sweeping energy efficiency improvements. In addition, energy efficiency through IOU programs is not the only vehicle for energy efficiency savings, nor is it the only IOU program designed to reduce grid-based purchases that the CPUC oversees. Without data representing the achievements of distributed generation or demand response programs it is difficult to report the total percentage reduction of grid-based energy purchases in the commercial sector. It is beyond the scope of this report to aggregate the achievements of energy efficiency programs with distributed generation and demand response.

IOU Projected vs. Reported Savings from Programs That Support GBI

Table 2 presents the IOUs' reported energy efficiency achievements and compares them to the projected savings for the 2004-2005 and 2006-2008 program cycles. This table represents all commercial buildings within the commercial sector: state buildings, private commercial buildings, and Federal and Local government buildings.

Table 2: Energy Efficiency Savings Attributed to GBI-Related Programs: Projected vs. Reported (2004-2008*)

	Budget	Net Peak Savings		Net Energy Savings		Net Gas Savings	
Total Commercial Sector	**Expenditure (Reported)**	**MW (Projected)**	**MW (Reported)**	**GWh (Projected)**	**GWh (Reported)**	**Million Therms (Projected)**	**Million Therms (Reported)**
2004-2005 Program Cycle	$121,149,845	388	233	2,024	1,378	24	16
2006-2008 Program Cycle	$104,095,756	482	110	2,106	604	17	9
Total	$225,245,601	870	343	4,130	1,982	41	24

*** Reported figures for the 2006-2008 Program Cycle only include reported accomplishments from 2006 through the Second Quarter (June) 2007.** Reported expenditures include only incentives provided to participants.

Data for this table taken from Attachment F "Energy Efficiency Program Budgets and Savings that Support GBI" of the 2005 GBI Report to the Governor; the Q2 IOU Reports submitted to the Energy Efficiency Groupware Application (http://eega2006.cpuc.ca.gov) included here as Attachment C; and the "Revised Joint Utility Report Comparing Best Estimates of Forecasted Savings Over the 2006-2008 Energy Efficiency Program Cycle" submitted July 6, 2006, included here as Attachment B.

As previously mentioned, meeting the CPUC mandated energy savings goals is the primary objective of the IOU energy efficiency programs. Table 2 shows that greater actual savings are necessary to meet IOU targeted levels of savings. In the 2004-2005 program cycle all utilities reported meeting their overall savings goals except for one.[20] Each IOU relied on a varying set of programs to meet their 2004-2005 savings goals. The complete set of programs contributing to GBI-related savings in 2004-2005 was included in the 2005 Report to the Governor. The programs operating in 2006-2008 and contributing to GBI related savings are included in this report as Attachment A.[21]

Reported Savings by Commercial Building Segment by IOU Service Territory

Within the commercial sector a variety of market segment players may participate, such as private commercial actors or public commercial actors. These actors each have access to IOU energy efficiency programs. However, because each IOU may serve

[20] San Diego Gas and Electric reported a savings shortfall of 14.1 MW

[21] Ordering Paragraph 5 of the May 24, 2006, Assigned Commissioner's Ruling (http://docs.cpuc.ca.gov/PUBLISHED/RULINGS/56598.htm) required the utilities to file a Joint Report that compares the utilities' best estimates of forecast surveys in state-owned and commercial buildings over the 2006-2008 program cycle with the 20% savings goal of GBI. The Joint Report includes a detailed list of all programs likely to contribute to GBI goals and estimates the program budget and energy savings for each sector. This report is included as Attachment A in the Appendix of this report. At the CPUC's request, a Revised Joint Report aggregated the individual IOU data into higher level tables. This Revised Joint Report is included in the Appendix as Attachment B.

each market segment differently, achievements in each segment across IOU service territories also differs. In 2007, the CPUC required a new and more detailed reporting format for GBI relevant achievements of the IOUs. Each IOU will track and report quarterly on the achievements relevant to the GBI by market segment, specifically; state buildings, commercial buildings (private sector), and other public buildings (federal and local government) among other reporting requirements. [22]

Table 3 presents only the achievements occurring in the 2006-2008 program cycle as these are the only data available in this more detailed format. The trends apparent across all IOUs in this program cycle will help to inform the program development of the 2009-2011 program cycle. It is important to note that this table is essentially a mid-cycle snapshot; it only includes data from 2006 through the second quarter (June) of 2007. At the time this table was developed, six quarters remain for IOUs to meet their self imposed savings targets in each segment of the commercial sector.

Table 3 illustrates that at this point in time the savings achieved in all the segments of the commercial sector are low. It is typical of most IOU energy efficiency portfolios that the cumulative savings over a three year program cycle displays a "hockey stick" effect, demonstrating greater savings achievements in the second half of the cycle than the first. Even though the achievements relevant to the GBI are low they may follow this same pattern.

[22] Definitions of building classifications used in this report:

State building: There is no existing definition of a state building in regard to the GBI. To date, only customers who pay from state funds are considered under the State section of the reporting form. These figures include IOU energy efficiency partnerships with California State Universities, the University of California, and the California Department of Corrections which are specific and discrete programs.

Commercial building: All buildings classified within the list of approved NAICS codes but excluding buildings belonging to either the State building or Other public building market sectors.

Other public building: Federal buildings and local government buildings.

Total Commercial Sector: Private Commercial and all Government Buildings. The sum of all buildings in the above three categories.

Table 3: 2006-2008* Reported vs. Projected Savings by Service Territory and Building Type

	Peak Reduction		Energy Savings		Gas Savings	
State Buildings Only	**kW Reported**	**kW Projected**	**kWh Reported**	**kWh Projected**	**Therms Reported**	**Therms Projected**
PG&E	430	10,130	1,786,130	49,580,000	15,058	510,000
SCE	160	11,116	1,099,963	49,580,000	*NA*	*NA*
SDG&E	267	6,000	1,382,473	34,892,476	644	1,023,545
SCG	*NA*	*NA*	*NA*	*NA*	0	208,390
Total	856	27,246	4,268,566	134,052,476	15,702	1,741,935
Commercial Buildings Only	**kW Reported**	**kW Projected**	**kWh Reported**	**kWh Projected**	**Therms Reported**	**Therms Projected**
PG&E	37,098	94,750	208,571,399	377,990,000	3,329,606	3,590,000
SCE	46,034	545,245	271,849,066	1,649,602,074	*NA*	*NA*
SDG&E	13,562	40,000	82,032,318	296,588,581	686,777	437,315
SCG	*NA*	*NA*	*NA*	*NA*	4,439,490	3,542,407
Total	96,694	679,995	562,452,783	2,324,180,655	8,455,872	7,569,722
Other Public Buildings Only	**kW Reported**	**kW Projected**	**kWh Reported**	**kWh Projected**	**Therms Reported**	**Therms Projected**
PG&E	8,917	24,630	17,688,421	109,180,000	165,057	1,080,000
SCE	2,351	54,765	14,738,549	169,309,836	*NA*	*NA*
SDG&E	858	14,000	4,889,904	71,741,271	59,019	2,489,791
SCG	*NA*	*NA*	*NA*	*NA*	101,413	3,785,786
Total	12,126	93,395	37,316,875	350,231,107	325,489	7,355,577
Total Commercial Sector	**kW Reported**	**kW Projected**	**kWh Reported**	**kWh Projected**	**Therms Reported**	**Therms Projected**
PG&E	46,445	129,510	228,045,951	536,750,000	3,509,721	5,180,000
SCE	48,545	611,126	287,687,578	1,872,812,939	*NA*	*NA*
SDG&E	14,686	60,000	88,304,695	403,222,328	746,439	3,950,651
SCG	*NA*	*NA*	*NA*	*NA*	4,540,903	7,536,583
Total	109,676	800,636	604,038,224	2,812,785,267	8,797,063	16,667,234

*__Reported figures for the 2006-2008 Program Cycle only include reported accomplishments from 2006 through the Second Quarter (June) of 2007.__ Data for this table taken from the Q2 2007 IOU Reports submitted to the Energy Efficiency Groupware Application (http://eega2006.cpuc.ca.gov).

Regardless of possible trends during the second half of the 2006-2008 program cycle, the sole bright spot are the gas savings. As illustrated in the Total Commercial Sector rows in Table 3, only gas savings is on track to achieve its three year GBI target with most of the savings coming from the private commercial building segment. In fact, the private Commercial Building segment is where the greatest degree of progress toward GBI goals is occurring. It is also where IOUs forecast the largest savings to occur, setting a demand reduction target of 680 MW for 2006 through 2008.

The 2006 through 2008 savings targets for the Other Public Buildings segment (including local and federal government buildings) is about one quarter of the size of the

private Commercial Buildings target at 93 MW. At this point in mid-cycle the Other Public Buildings segment is experiencing relative success with an average of 13% of the savings target having been met.

The savings target for the State Buildings segment was set much lower than either of the two other segments. The target is to reduce demand in State Buildings by 27 MW during 2006 through 2008; about 5% of the Commercial Building target. To date State Buildings have reduced demand by 0.85 MW – less than 4% of the three year target. State buildings have also achieved gas savings of less than 1% of the three year target.

To meet the GBI required 20% reduction in grid supplied energy, State Buildings will have to reduce their demand by a total of 120 MW by 2015. Table 4 specifically draws out the challenge faced by State Building operators who are responsible for the decisions which will be necessary to meet the GBI targets.

Table 4: Percent of GBI 20% reduction target for State Buildings achieved by IOU programs 2004-2008*

Utility	% of State Building Floorspace**	Total kW Savings Reported	Total kWh Savings Reported	Total Therm Savings Reported
PG&E	46%	2,225	13,453,434	533,208
SCE	20%	514	3,315,652	NA
SDG&E	4%	1,739	7,060,043	67,667
SCG*	NA	NA	NA	125,095
Total	**70%**	**4,478**	**23,829,129**	**725,971**
GBI 20% Target by 2015		**120,000**	**531,000,000**	**NA**
% Completion of Target via IOU Voluntary Programs		**3.73%**	**4.49%**	**NA**

*Reported figures only include reported accomplishments from 2004 through the Second Quarter (June) of 2007.
**State Building floor space data taken from the Statewide Property Inventory. Some IOUs and Publicly Owned Utilities use different service territory definitions for different energy services (electricity and gas). This analysis was done using electric service territory as the determining factor. As a result, Southern California Gas is not represented in that column. Total kW, kWh, and therms savings data taken from the Q2 2007 IOU Reports submitted to the Energy Efficiency Groupware Application (http://eega2006.cpuc.ca.gov). GBI 20% target by 2015 figures taken from the "Revised Joint Utility Report Comparing Best Estimates of Forecasted Savings Over the 2006-2008 Energy Efficiency Program Cycle" submitted July 6, 2006, included here as Attachment B.

Marketing, Education and Outreach (ME&O) Programs Supportive of GBI

The GBI Executive Order directs the CPUC to report on its progress in supporting a campaign to inform building owners and operators of the compelling economic benefits of energy efficiency measures. Over the 2004-2005 and 2006-2008 program cycle planning process, the utilities have developed, in collaboration with the CPUC, outreach efforts that are tailored to the specific needs of building owners and operators, recognizing the diversity of concerns and institutional environments.

Between 2006 and 2008, California ratepayers will have funded approximately $300 million for public education, marketing, and outreach to support customer demand-side programs that directly support the goals of the GBI.[23] Of this amount, $176 million funds public education and outreach for utility energy efficiency programs.[24] Approximately one-third of the $176 million is for statewide promotion of energy efficiency through the Flex Your Power Program (FYP) and the remainder is for educational efforts focused on individual utility territories. In addition, between 2006 and 2008 ratepayers are funding approximately $70 million for energy efficiency outreach to low income households,[25]

In 2006-2008, a significant component of the Statewide Marketing and Outreach programs, mainly through the FYP program, strengthened the outreach aimed at the commercial sector that began in 2004. One of the main education components produced for direct use by both the commercial and local government sectors is the best practice guides specific to each sector. To date there are now three best practices

[23]This number aggregates ratepayer funding for ME&O for all customer demand-side programs; $80 million for demand response (CPUC decision number D.06-03-024), and another $4.5 million for solar installations (CPUC decision number D.07-05-047). The Commission has authorized an additional $180 million for ME&O efforts, throughout the roll-out and implementation phases, related to advanced metering infrastructure (AMI), which is the installation of meters designed to provide real-time cost and usage information to individual customers. The AMI program costs will be spread over many years though the exact timeframe is undecided. D.06-07-027 approved approximately $72 million for PG&E's AMI ME&O, D.07-04-043 approved approximately $38 million for SDG&E's AMI ME&O, A.07-07-026 includes approximately $70 million for SCE's proposed AMI ME&O.

[24] D.05-09-043 authorized 2006-2008 energy efficiency portfolio plans and funding levels, including program areas covering statewide marketing, education centers, third-party, and local government partnerships.

[25] The text outlining the purpose and allocation of these funds are available in CPUC decision number D.06-12-036, D.06-12-038, and D.05-12-026

guides addressing the commercial sector.[26] A best practices guide for local government was added in 2007.[27] The FYP program also solicits nominees for its Flex Your Power awards to highlight innovative green building techniques, especially energy efficiency, within the commercial, institutional and local government sectors at its annual awards ceremony.

In addition to the FYP focus on the commercial and local government sectors, seven energy efficiency information programs implemented by third parties address the commercial sector. Additionally, utility energy efficiency education centers offer courses and training for commercial architects, designers and building contractors as well as HVAC contractors.

Moving the education and outreach effort forward during the 21st century requires that the education medium be interactive and web-based. The CPUC is taking steps to ensure that the public is able to utilize centralized on-line resources to understand the full range of energy efficiency efforts, program elements, best practices and lessons learned to speed the adoption of energy efficient practices. The CPUC is collaborating with the IOUs to develop an Energy Efficiency Web Portal (EE Web Portal) that will provide one integrated point of access to a multitude of energy efficiency information.[28] The web portal will be a user-centered, interactive resource that allows users to easily navigate multiple points of data, applications, and information systems. The web portal will link with other websites, including the utilities' websites and other government agencies. When the web portal is developed a link to it will be clearly presented from the CPUC's own energy efficiency website[29].

[26] These guidebooks can be found at http://www.fypower.org/com/bpg/.
[27] The Local Government guidebook is available at: http://www.fypower.org/bpg/index.html?b=institutional.
[28] We envision a much expanded portal that is comprehensive, interactive, and user-friendly.
[29] http://www.cpuc.ca.gov/PUC/energy/electric/energy+efficiency/

Climate Impact of IOU Programs

Following the passage of AB 32, the "Global Warming Solutions Act of 2006," California's awareness of the built environment's contribution to carbon emissions is even greater. The GBI Executive Order provided the observation in 2004 that "commercial buildings use 36% of the state's electricity and account for a large percentage of greenhouse gas emissions…." AB 32 requires that the state's global warming emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on global warming emissions that will be phased in starting in 2012. In order to effectively implement the cap, AB 32 directs the California Air Resources Board (CARB) to develop appropriate regulations and establish a mandatory reporting system to track and monitor global warming emissions levels.

The CPUC has calculated the total carbon emission reductions from energy efficiency measures installed in the entire commercial building sector r from 2004 to date. The measures implemented under the programs identified by the utilities as contributing to the GBI have yielded an estimated 1.2 million metric tons CO2 [30] in first year cumulative avoided emissions.[31] Savings resulting from lighting upgrades alone[32] account for 660 thousand metric tons or just over half of the total first year cumulative savings. Table 4 shows that State Buildings have achieved 24 GWh and 0.7 million therms of savings. Using the same calculation methodology as above, these State Building energy savings account for over 17 thousand metric tons of CO2 or approximately 1.5 percent of the commercial sector total.

[30] This figure is based on the US EPA eGRID2006 CA-wide non-baseload emissions rate from 2004 plants of 1,279 lbs CO2/MWh multiplied by the reported megawatt hour savings from all GBI programs in operation from 2004 to date and a CO2 emission factor for natural gas from the US EPA (www.epa.gov/climatechange/emissions/ind_assumptions.html) of 117 lbs CO2/MMBtu multiplied by reported therm savings.

[31] First year cumulative savings are different from the lifecycle savings metric used in the 2005 GBI Report to the Governor in that only new savings occurring in the first year of measure installation are included versus the total carbon emission savings occurring over the lifetime of the measures. Using first year cumulative is necessary at this time because an accurate linkage is not available between the lifetime of each energy efficient measure installed within the GBI and the emission profile of the marginal generating resource that is offset.

[32] Attachment C includes a table that presents the total commercial sector energy savings stratified by end-use. Lighting upgrades have resulted in 1,163 GWh alone.

IV. CPUC Continues Its Commitment In Addressing Challenges Towards Achieving GBI Goals

In 2004, the Governor's Executive Order clearly identified the need to improve the efficiency of the entire commercial building sector of the state and set a realistic but challenging target. The data reported by IOUs for the period between 2004 and Q2 2007 demonstrate that there are impressive energy and greenhouse gas savings yet it is clear that significant additional sector-wide savings are necessary. Progress toward achievement of the State Building sector target is apparent but State Building electricity and gas savings lag well behind those of the private Commercial Building segment or even the Federal and Local government buildings. In the new emissions regime formed by AB 32, aggressive energy savings in State Buildings are especially important should the state desire to lead by example.

Achievement of the considerable reductions in energy use for state and commercial buildings envisioned by the GBI and necessary to meet the challenges of AB 32 will require addressing key barriers that hinder more widespread adoption of energy efficiency measures.

For State Buildings, financing the up-front costs has represented the primary barrier that has resulted in its dismal performance. Annual budget constraints have limited the ability of state building operators to gather the capital necessary to retro-commission buildings or even perform investment grade audits to explore the full range of cost-effective energy efficiency measures and programs. To address this barrier, AB 2160, signed into law in September 2007, directs the California Energy Commission (CEC) in consultation with the Department of General Services and the Treasurer's office, "to identify and develop appropriate financing and project delivery mechanisms to facilitate state building energy and resource efficient projects…and [to] maximize the use of outside financing, including, but not limited to, loan programs, revenue bonds, municipal tax-exempt leases, and other financial instruments supported by project savings, and

minimize the use of General Fund moneys for these purposes."[33] The AB 2160 Green Building Report as it is referred to, offers a menu of financing options for improved State Building achievements without identifying which elements of the financing picture are missing or still need to be developed. The State must realize that without adequate funding streams and financing mechanisms, all State Buildings are hamstrung to increase energy savings achievements and will not meet the GBI goal for this segment.

To help respond to this barrier, the CPUC has directed the utilities in D. 07-10-032 to provide zero interest loans to all institutional customers for capital intensive energy efficiency upgrades. This program is referred to as "On-Bill Financing." Loan repayment will be handled as a part of regular billing. To be effective, the State must seek to participate in this program, provide early identification of outstanding obstacles, and work with the relevant parties to minimize them. State building operators and IOU program managers should mutually benefit from this creative financing mechanism.

In the commercial building sector, there are challenges in addition to financing. Some financing options already exist in the form of business loans, and on-bill financing exists in the SCE, SDG&E, and SCG service territories and will be extended to small commercial customers in all IOU service territories in 2009-2011. A potentially larger barrier is that some building operators are simply not aware of the value proposition in the form of reduced operating costs that energy efficiency opportunities bring. This barrier was identified in the first CPUC GBI Report to the Governor. The CPUC is continuing to work with the CEC and the utilities to further the development of a convincing value proposition. In addition, getting the right message to the officials in an organization with decision making power can greatly influence whether action is taken or not. Identifying key decision makers and bringing the value proposition to them in meaningful terms is paramount to gaining their participation.

[33] AB 2160, Section 1(b)(1). Report available at http://www.energy.ca.gov/greenbuilding/ab2160/documents/index.html

The CPUC will continue to support energy efficiency as the state's number one preferred resource for meeting future demand growth. As a strong advocate of energy efficiency, the Commission will strive to fulfill its part of the goals of the GBI and identify sector-wide opportunities for improvement in each biennial report.

V. APPENDIX

Attachment A: Original Joint IOU Projection of Savings from the 2006-2008 Energy Efficiency Portfolio Toward the 20% Reduction Green Building Initiative Goal

SCE Comparison

SCE: 2006-2008 Energy Efficiency Programs Designed to support Green Building Initiative

Program Name	Program Description	Major Program End-Use/Services		Projected Program Budget (2006-08)	Marketing & Outreach Budget (2006-08)	Financial Incentives Budget (2006-08)	Projected Energy Savings Goals (2006-08) kW	kWh	Therms	Lifecycle GHG Emission Reduction (2006-08) Cumulative CO2 reduction due to kWh savings (ton) 2006-2008	Cumulative CO2 reduction due to Therm savings (ton) 2006-2008	Total Lifecycle CO2 reduction (ton)
SCE - Business Incentive Program	The Business Incentive Program will target all nonresidential customers by offering a full range of solutions, including audits, design assistance, and incentives for qualifying measures.	HVAC, Lighting, Refrigeration, Food Processing, Other	**Total**	$ 113,999,715	$ 1,781,252	$ 80,447,903	387,444	1,156,755,491	-	636,486	-	8,283,077
			Govt Buildings									
			Federal	$ 1,190,303	$ 18,599	$ 839,979	4,126	12,208,009	-	6,717	-	101,983
			State	$ 1,508,217	$ 23,566	$ 1,064,326	4,481	15,675,318	-	8,625	-	130,949
			Local	$ 3,479,686	$ 54,370	$ 2,455,562	10,673	36,078,303	-	19,851	-	301,391
			Subtotal	$ 6,178,205	$ 96,535	$ 4,359,867	19,280	63,961,629	-	35,194	-	534,324
			Private Buildings									
			Commercial	$ 60,931,373	$ 952,056	$ 42,998,363	220,499	605,125,004	-	332,960	-	4,290,804
			Industrial	$ 41,946,398	$ 655,415	$ 29,600,949	130,901	438,734,425	-	241,406	-	3,110,966
			Agricultural	$ 4,943,739	$ 77,246	$ 3,488,723	16,764	48,934,432	-	26,925	-	346,983
			Subtotal	$ 107,821,510	$ 1,684,717	$ 76,088,036	368,164	1,092,793,861	-	601,292	-	7,748,753
SCE - Comprehensive HVAC	Program will target the upstream, midstream and downstream nature of the commercial and residential HVAC market.	HVAC	**Total**	$ 46,064,941	$ 2,510,255	$ 30,175,634	75,604	137,577,695	-	75,700	-	820,692
			Govt Buildings									
			Federal	$ -	$ -	$ -	-	-	-	-	-	-
			State	$ -	$ -	$ -	-	-	-	-	-	-
			Local	$ 13,188,850	$ 718,711	$ 8,639,584	21,646	39,389,861	-	21,674	-	234,972
			Subtotal	$ 13,188,850	$ 718,711	$ 8,639,584	21,646	39,389,861	-	21,674	-	234,972
			Private Buildings									
			Commercial	$ 32,652,008	$ 1,779,333	$ 21,389,261	53,590	97,518,588	-	53,658	-	581,728
			Industrial	$ 224,082	$ 12,211	$ 146,789	368	669,245	-	368	-	3,992
			Agricultural	$ -	$ -	$ -	-	-	-	-	-	-
			Subtotal	$ 32,876,091	$ 1,791,544	$ 21,536,050	53,958	98,187,834	-	54,026	-	585,720
SCE - Retrocommissioning	Program applies a systematic process for improving and optimizing larger sized building's operations and for supporting those improvements with enhanced documentation and training.	Other	**Total**	$ 11,626,203	$ 115,574	$ 7,200,000	9,600	39,040,000	-	21,481	-	214,811
			Govt Buildings									
			Federal	$ 140,046	$ 1,392	$ 86,729	251	819,404	-	451	-	4,509
			State	$ 208,965	$ 2,077	$ 129,410	96	488,328	-	269	-	2,687
			Local	$ 468,803	$ 4,660	$ 290,326	169	811,395	-	446	-	4,465
			Subtotal	$ 817,815	$ 8,130	$ 506,465	516	2,119,127	-	1,166	-	11,660
			Private Buildings									
			Commercial	$ 4,282,095	$ 42,568	$ 2,651,862	4,346	15,555,683	-	8,559	-	85,593
			Industrial	$ 6,200,093	$ 61,634	$ 3,839,660	4,479	20,320,112	-	11,181	-	111,808
			Agricultural	$ 326,201	$ 3,243	$ 202,013	259	1,045,078	-	575	-	5,750
			Subtotal	$ 10,808,389	$ 107,445	$ 6,693,535	9,084	36,920,873	-	20,315	-	203,151
SCE - Industrial EE	Program is structured to reflect the process industry's reluctance to alter elements of a working production system for reasons other than product output or quality.	HVAC, Lighting, Motors, Other	**Total**	$ 37,360,338	$ 896,040	$ 12,782,560	30,039	159,332,820	-	87,670	-	1,418,209
			Govt Buildings									
			Federal	$ 450,032	$ 10,793	$ 153,975	785	3,344,209	-	1,840	-	29,767
			State	$ 671,502	$ 16,105	$ 229,749	300	1,993,001	-	1,097	-	17,740
			Local	$ 1,506,481	$ 36,131	$ 515,431	529	3,311,523	-	1,822	-	29,476
			Subtotal	$ 2,628,014	$ 63,030	$ 899,155	1,615	8,648,733	-	4,759	-	76,982
			Private Buildings									
			Commercial	$ 13,760,342	$ 330,024	$ 4,707,998	13,600	63,486,958	-	34,933	-	565,092
			Industrial	$ 19,923,749	$ 477,846	$ 6,816,762	14,015	82,931,883	-	45,632	-	738,170
			Agricultural	$ 1,048,233	$ 25,141	$ 358,645	810	4,265,246	-	2,347	-	37,965
			Subtotal	$ 34,732,323	$ 833,010	$ 11,883,405	28,424	150,684,087	-	82,911	-	1,341,227
SCE - Apricultural EE	Program will encourage agricultural production and water supply customers to improve the energy efficiency of their facilities, including electricity used for water pumping and for non-pumping activities.	HVAC, Lighting, Refrigeration, Other	**Total**	$ 37,292,557	$ 3,850,520	$ 10,221,554	36,100	129,368,274	-	71,183	-	1,245,634
			Govt Buildings									
			Federal	$ 449,216	$ 46,382	$ 123,126	944	2,715,288	-	1,494	-	26,144
			State	$ 670,283	$ 69,208	$ 183,719	361	1,618,192	-	890	-	15,581
			Local	$ 1,503,747	$ 155,265	$ 412,164	636	2,688,750	-	1,479	-	25,889
			Subtotal	$ 2,623,246	$ 270,855	$ 719,008	1,941	7,022,230	-	3,864	-	67,614
			Private Buildings									
			Commercial	$ 13,735,377	$ 1,418,201	$ 3,764,743	16,344	51,547,435	-	28,363	-	496,329
			Industrial	$ 19,887,602	$ 2,053,429	$ 5,451,012	16,842	67,335,496	-	37,050	-	648,346
			Agricultural	$ 1,046,331	$ 108,035	$ 286,790	973	3,463,113	-	1,906	-	33,345
			Subtotal	$ 34,669,310	$ 3,579,666	$ 9,502,545	34,159	122,346,044	-	67,319	-	1,178,020
SCE - Savings By Design	Program will provide the nonresidential new construction industry with a broad palette of technical and financial resources to aid them in designing new facilities to the most cost-effective energy and resource efficiency standards.	Other	**Total**	$ 28,458,461	$ 876,831	$ 18,501,712	26,315	128,617,151	-	70,769	-	1,081,430
			Govt Buildings									
			Federal	$ 138,871	$ 4,279	$ 90,284	88	268,987	-	148	-	2,262
			State	$ 326,673	$ 10,065	$ 212,380	354	498,554	-	274	-	4,192
			Local	$ 681,304	$ 20,992	$ 442,936	282	4,414,727	-	2,429	-	37,120
			Subtotal	$ 1,146,848	$ 35,335	$ 745,601	723	5,182,268	-	2,851	-	43,573
			Private Buildings									
			Commercial	$ 21,295,121	$ 656,122	$ 13,844,607	20,580	94,643,263	-	52,076	-	795,773
			Industrial	$ 3,619,204	$ 111,511	$ 2,352,955	3,943	16,644,680	-	9,158	-	139,951
			Agricultural	$ 2,397,288	$ 73,863	$ 1,558,550	1,070	12,146,940	-	6,684	-	102,133
			Subtotal	$ 27,311,613	$ 841,496	$ 17,756,111	25,592	123,434,883	-	67,918	-	1,037,857

SCE: 2006-2008 Energy Efficiency Programs Designed to support Green Building Initiative

Program Name	Program Description	Major Program End-Use/Services		Projected Program Budget (2006-08)	Marketing & Outreach Budget (2006-08)	Financial Incentives Budget (2006-08)	Projected Energy Savings Goals (2006-08) kW	kWh	Therms	Lifecycle GHG Emission Reduction (2006-08) Cumulative CO2 reduction due to kWh savings (ton) 2006-2008	Cumulative CO2 reduction due to Therm savings (ton) 2006-2008	Total Lifecycle CO2 reduction (ton)
SCE - Sustainable Communities	Program provides comprehensive energy efficiency and demand response services to help address the increasing demand for electricity in the State.	Other	**Total**	$ 4,284,084	$ 547,086	$ 1,400,000	21,105	8,212,000	-	4,519	-	72,296
			Govt Buildings									
			Federal	$ 20,905	$ 2,670	$ 6,832	70	17,174	-	9	-	151
			State	$ 49,177	$ 6,280	$ 16,071	284	31,832	-	18	-	280
			Local	$ 102,562	$ 13,097	$ 33,516	226	281,873	-	155	-	2,482
			Subtotal	$ 172,644	$ 22,047	$ 56,419	580	330,880	-	182	-	2,913
			Private Buildings									
			Commercial	$ 3,205,728	$ 409,378	$ 1,047,603	16,505	6,042,821	-	3,325	-	53,199
			Industrial	$ 544,828	$ 69,576	$ 178,045	3,162	1,062,736	-	585	-	9,356
			Agricultural	$ 360,883	$ 46,086	$ 117,933	858	775,563	-	427	-	6,828
			Subtotal	$ 4,111,440	$ 525,039	$ 1,343,581	20,525	7,881,120	-	4,336	-	69,383
SCE Partnerships	Program targets local Governments, especially cities, counties and special districts who have access to residential, commercial and institutional constituents that are also SCE customers.	Other	**Total**	$ 44,239,053	$ 1,731,248	$ 20,691,490	18,418	90,611,643	-	49,858	-	717,779
			Govt Buildings									
			Federal	$ -	$ -	$ -	-	-	-	-	-	-
			State	$ 14,496,541	$ 567,307	$ 6,780,322	5,196	33,463,880	-	18,413	-	265,084
			Local	$ 29,742,512	$ 1,163,941	$ 13,911,168	13,222	57,147,763	-	31,445	-	452,695
			Subtotal	$ 44,239,053	$ 1,731,248	$ 20,691,490	18,418	90,611,643	-	49,858	-	717,779
			Private Buildings									
			Commercial	$ -	$ -	$ -	-	-	-	-	-	-
			Industrial	$ -	$ -	$ -	-	-	-	-	-	-
			Agricultural	$ -	$ -	$ -	-	-	-	-	-	-
			Subtotal	$ -	$ -	$ -	-	-	-	-	-	-
Lighting Energy Efficiency with Demand Response Program (LEEDR)	Will implement new and emerging lighting technologies, will test General Electric's Wireless Lighting Management system, and new reporting and monitoring techniques to provide wireless dimming for existing lighting systems.	Lighting	**Total**	$ 2,973,950	$ 350,000	$ 2,973,950	3,794	10,993,672	-	6,049	-	30,245
			Govt Buildings									
			Federal	$ 31,226	$ 3,675	$ 31,226	40	115,434	-	64	-	318
			State	$ 35,687	$ 4,200	$ 35,687	46	131,924	-	73	-	363
			Local	$ 81,784	$ 9,625	$ 81,784	104	302,326	-	166	-	832
			Subtotal	$ 148,698	$ 17,500	$ 148,698	190	549,684	-	302	-	1,512
			Private Buildings									
			Commercial	$ 1,695,152	$ 199,500	$ 1,695,152	2,163	6,266,393	-	3,448	-	17,240
			Industrial	$ 1,017,091	$ 119,700	$ 1,017,091	1,298	3,759,836	-	2,069	-	10,344
			Agricultural	$ 113,010	$ 13,300	$ 113,010	144	417,760	-	230	-	1,149
			Subtotal	$ 2,825,253	$ 332,500	$ 2,825,253	3,604	10,443,989	-	5,747	-	28,733
CA Preschool Energy Efficiency Program	Will include detailed technical audits and installations of lighting, refrigeration and HVAC measures in preschool centers as well as the energy education of the staff, children, and their families.	HVAC, Lighting, Refrigeration	**Total**	$ 2,999,696	$ 210,000	$ 1,561,294	1,899	3,786,435	-	2,083	-	22,649
			Govt Buildings									
			Federal	$ -	$ -	$ -	-	-	-	-	-	-
			State	$ -	$ -	$ -	-	-	-	-	-	-
			Local	$ 899,909	$ 63,000	$ 468,388	570	1,135,930	-	625	-	6,795
			Subtotal	$ 899,909	$ 63,000	$ 468,388	570	1,135,930	-	625	-	6,795
			Private Buildings									
			Commercial	$ 2,099,787	$ 147,000	$ 1,092,906	1,329	2,650,504	-	1,458	-	15,854
			Industrial	$ -	$ -	$ -	-	-	-	-	-	-
			Agricultural	$ -	$ -	$ -	-	-	-	-	-	-
			Subtotal	$ 2,099,787	$ 147,000	$ 1,092,906	1,329	2,650,504	-	1,458	-	15,854
Lights for Learning CFL Fundraiser	Captures electric savings and furthers customer awareness of CFLs using a unique sales channel and offers Energy Star CFLs as an alternative to the items typically sold through fundraisers	Lighting	**Total**	$ 612,882	$ 121,577	$ 86,606	808	8,517,757	-	4,687	-	44,056
			Govt Buildings									
			Federal	$ -	$ -	$ -	-	-	-	-	-	-
			State	$ -	$ -	$ -	-	-	-	-	-	-
			Local	$ 306,441	$ 60,789	$ 43,303	404	4,258,879	-	2,343	-	22,028
			Subtotal	$ 306,441	$ 60,789	$ 43,303	404	4,258,879	-	2,343	-	22,028
			Private Buildings									
			Commercial	$ -	$ -	$ -	-	-	-	-	-	-
			Industrial	$ -	$ -	$ -	-	-	-	-	-	-
			Agricultural	$ 306,441	$ 60,789	$ 43,303	404	4,258,879	-	2,343	-	22,028
			Subtotal	$ 306,441	$ 60,789	$ 43,303	404	4,258,879	-	2,343	-	22,028
GRAND TOTAL				$ 329,911,881	$ 12,990,384	$ 186,042,703	611,126	1,872,812,939	-	1,030,485	-	13,950,878

SCE Notes:

1. Projected energy savings are based on SCE's 2006-08 Compliance Filing, dated January 6, 2006 using 2004 as a basis for expected participation by customer segments.
2. The projected program budgets which include marketing & outreach and financial incentives are based on SCE's 2006-08 Compliance Filing, dated January 6, 2006 using 2004 as a basis for expected participation by customer segments.

PG&E Comparison

PG&E 2006-2008 Energy Efficiency Programs Designed to support Green Building Initiative

Program Name	Program Description	Major Program End-Use/Services		Projected Program Budget (2006-08)	Marketing & Outreach Budget (2006-08)	Financial Incentives Budget (2006-08)	Projected Energy Savings Goals (2006-08)			Lifecycle GHG Emmission Reduction (2006-08)		
							kw	kwh	therms	Annual CO2 reduction due to kWh savings (ton)	Annual CO2 reduction due to Therm savings (ton)	Total Lifecycle CO2 reduction (ton)
PG&E -Mass Markets	Targets single family and multifamily res retrofit, res & comm renters, & comm customers to deliver a portfolio of energy efficiency, demand response, and distributed generat'n svcs, statewide/target'd elements. Greatest potential is in lighting and HVAC.	Lighting	Govt Buildings									
		HVAC	Federal	526,998	55,269	266,712	434	2,243,947	20,609	963	177	15,962
		Motors	State	9,317,155	977,138	4,715,375	7,669	39,672,245	364,361	17,021	3,136	282,201
		Others	Local	14,895,544	1,562,173	7,538,575	12,260	63,424,902	582,512	27,212	5,014	451,161
			Subtotal	24,739,697	2,594,580	12,520,662	20,363	105,341,094	967,482			
			Private Buildings									
			Commercial	29,526,823	3,096,630	14,943,407	24,303	125,724,570	1,154,689	53,940	9,940	894,318
			Industrial	1,815,761	190,428	918,949	1,495	7,731,469	71,008	3,317	611	54,996
			Agricultural	4,796,376	503,021	2,427,427	3,948	20,422,864	187,569	8,762	1,615	145,274
			Subtotal	36,138,959	3,790,079	18,289,782	29,745	153,878,903	1,413,267			
			Total	60,878,657	6,384,659	30,810,444	50,108	259,219,997	2,380,749	111,215	20,493	1,843,913
PG&E -School and Colleges	Targets public and private K-12 schools, 2- to 4-yr colleges, UC and CSU sys to provide a cost effective, comprehensive portfolio of pgm elements to achieve energy & demand savings, demand response and distributed generation goals.	Lighting	Govt Buildings									
		HVAC	Federal	434,240	22,644	278,668	264	1,168,902	24,061	217	-	3,041
		Motors	State	2,444,963	127,498	1,569,025	1,485	6,581,438	135,476	1,223	-	17,120
		Others	Local	4,537,269	236,605	2,911,736	2,756	12,213,581	251,412	2,269	-	31,771
			Subtotal	7,416,471	386,747	4,759,429	4,505	19,963,921	410,950			
			Private Buildings									
			Commercial	19,641,861	1,024,266	12,604,923	11,930	52,872,661	1,088,363	9,824	-	137,537
			Industrial	17,708,639	923,454	11,364,301	10,756	47,668,744	981,243	8,857	-	124,000
			Agricultural	2,801,619	146,096	1,797,905	1,702	7,541,499	155,239	1,401	-	19,618
			Subtotal	40,152,120	2,093,815	25,767,128	24,388	108,082,904	2,224,845			
			Total	47,568,591	2,480,563	30,526,557	28,892	128,046,826	2,635,794	23,792	-	333,087
PG&E -Retail Stores	Targets energy needs of retail market segment: restaurants, supermkts, big box & general retail. Includes deemed savings rebates, calculated incentives, commissioning retro-commissioning, and demand response.	Lighting	Govt Buildings									
		HVAC	Federal	106,540	4,196	50,620	109	643,538	90	231	-	3,232
		Motors	State	92,988	3,662	44,181	95	561,679	78	202	-	2,821
		Others	Local	617,998	24,340	293,626	630	3,732,912	521	1,339	-	18,750
			Subtotal	817,527	32,199	388,427	834	4,938,129	689			
			Private Buildings									
			Commercial	4,762,013	187,557	2,262,547	4,858	28,764,118	4,016	10,320	-	144,482
			Industrial	4,369,912	172,113	2,076,251	4,458	26,395,699	3,685	9,470	-	132,586
			Agricultural	475,985	18,747	226,152	486	2,875,108	401	1,032	-	14,442
			Subtotal	9,607,909	378,417	4,564,950	9,802	58,034,925	8,102			
			Total	10,425,436	410,617	4,953,377	10,636	62,973,054	8,792	22,594	-	316,314
PG&E -High Technology Facilities	Targets high tech facilities & addresses their unique energy utilization needs. Promotes energy mgmt through statewide financial incentives and elements targeted to and customized for high technology facilities.	Lighting	Govt Buildings									
		HVAC	Federal	81,358	2,446	52,779	45	306,929	177	170	-	2,376
		Motors	State	74,408	2,237	48,270	41	280,711	161	155	-	2,173
		Others	Local	617,782	18,574	400,770	343	2,330,639	1,341	1,289	-	18,041
			Subtotal	773,547	23,258	501,819	430	2,918,278	1,679			
			Private Buildings									
			Commercial	4,792,988	144,107	3,109,329	2,662	18,081,981	10,403	9,998	-	139,971
			Industrial	3,456,325	103,919	2,242,204	1,920	13,039,301	7,502	7,210	-	100,936
			Agricultural	384,982	11,575	249,748	214	1,452,381	836	803	-	11,243
			Subtotal	8,634,295	259,601	5,601,281	4,796	32,573,663	18,740			
			Total	9,407,843	282,858	6,103,100	5,226	35,491,941	20,419	19,624	-	274,741

PG&E 2006-2008 Energy Efficiency Programs Designed to support Green Building Initiative

Program Name	Program Description	Major Program End-Use/Services		Projected Program Budget (2006-08)	Marketing & Outreach Budget (2006-08)	Financial Incentives Budget (2006-08)	Projected Energy Savings Goals (2006-08)			Lifecycle GHG Emmission Reduction (2006-08)		
							kw	kwh	therms	Annual CO2 reduction due to kWh savings (ton)	Annual CO2 reduction due to Therm savings (ton)	Total Lifecycle CO2 reduction (ton)
PG&E -Medical Facilities	Targets new and existing medical facilities to provide calculated incentives as well as a centralized point of contact to promote energy management including demand response and distributed generation.	Lighting HVAC Motors Others	Govt Buildings									
			Federal	174,177	2,066	89,600	226	558,654	4,024	446	-	6,250
			State	159,299	1,890	81,946	207	510,933	3,681	408	-	5,716
			Local	1,251,355	14,845	643,721	1,622	4,013,585	28,912	3,207	-	44,905
			Subtotal	1,584,831	18,801	815,267	2,055	5,083,173	36,617			
			Private Buildings									
			Commercial	7,935,681	94,144	4,082,265	10,288	25,452,836	183,351	20,341	-	284,770
			Industrial	6,858,192	81,361	3,527,984	8,891	21,996,905	158,456	17,579	-	246,104
			Agricultural	747,017	8,862	384,280	968	2,395,976	17,260	1,915	-	26,807
			Subtotal	15,540,890	184,367	7,994,529	20,148	49,845,717	359,067			
			Total	17,125,721	203,168	8,809,796	22,203	54,928,890	395,684	43,897	-	614,552
PG&E -Large Commercial Buildings	Targets large commercial and government office customers to provide a comprehensive, cost effective portfolio of pgm elements to achieve energy & demand savings, demand response and distributed generation goals.	Lighting HVAC Motors Others	Govt Buildings									
			Federal	593,202	23,360	281,387	639	1,899,148	19,240	731	-	10,228
			State	542,529	21,365	257,350	584	1,736,919	17,596	668	-	9,354
			Local	4,504,427	177,385	2,136,685	4,849	14,421,018	146,097	5,547	-	77,665
			Subtotal	5,640,158	222,110	2,675,422	6,071	18,057,085	182,933			
			Private Buildings									
			Commercial	34,947,059	1,376,219	16,577,214	37,618	111,883,740	1,133,476	43,040	-	602,553
			Industrial	25,201,068	992,421	11,954,182	27,127	80,681,746	817,373	31,037	-	434,514
			Agricultural	2,807,017	110,541	1,331,515	3,022	8,986,725	91,043	3,457	-	48,398
			Subtotal	62,955,144	2,479,181	29,862,911	67,767	201,552,211	2,041,892			
			Total	68,595,302	2,701,291	32,538,332	73,838	219,609,296	2,224,825	84,479	-	1,182,712
PG&E -Hospitality Facilities	Targets new and existing lodging & hotel facilities to deliver a portfolio of energy efficiency services including statewide and targeted elements to achieve energy and demand savings.	Lighting HVAC Motors Others	Govt Buildings									
			Federal	81,588	7,295	50,587	52	258,260	230	65	-	905
			State	74,619	6,672	46,265	48	236,199	211	59	-	828
			Local	619,531	55,393	384,124	398	1,961,073	1,749	491	-	6,873
			Subtotal	775,738	69,360	480,976	498	2,455,532	2,191			
			Private Buildings									
			Commercial	4,806,557	429,760	2,980,182	3,088	15,214,754	13,573	3,809	-	53,323
			Industrial	3,466,111	309,909	2,149,073	2,227	10,971,683	9,788	2,747	-	38,452
			Agricultural	386,072	34,519	239,374	248	1,222,079	1,090	306	-	4,283
			Subtotal	8,658,740	774,188	5,368,629	5,563	27,408,516	24,451			
			Total	9,434,478	843,547	5,849,606	6,062	29,864,048	26,642	7,476	-	104,663
GRAND TOTAL				223,436,028	13,306,703	119,591,212	196,964	790,134,052	7,692,904	313,077	20,493	4,669,982

PG&E Footnotes:

1. The projected energy savings goals are derived from Attachment 5, Joint IOU Case Management Statement, July 18. 2005 and updated according to PG&E's April 14, 2006 supplement compliance filing.
2. The projected program budgets which include marketing & outreach and financial incentives are based on the savings percentage established in the Joint IOU Case Management Statement.
   The proposed EM&V budget costs were at the portfolio level and are therefore excluded. Financial incentives are incentives paid to participants.
3. The estimated allocation percentage of projected budgets and energy savings goals for the government and private buildings are derived from the percentage amount of financial incentives for participants in PY 2004.

SDG&E Comparison

SDG&E 2006-2008 Energy Efficiency Programs Designed to support Green Building Initiative

Program Name	Program Description	Major Program End-Use/Services		Projected Program Budget (2006-08)	Marketing & Outreach Budget (2006-08)	Financial Incentives Budget (2006-08)	Projected Energy Savings Goals (2006-08)			Lifecycle GHG Emmission Reduction (2006		
							kw	kwh	therms	Cumulative CO2 reduction due to kWh savings (ton) 2006-2008	Cumulative CO2 reduction due to Therm savings (ton) 2006-2008	Total Lifecycle CO2 reduction (ton)
SDGE IOU/Community College Partnership	Program will offer incentives for retrofit and new construction projects, continuous commissioning, and educational training for the community colleges.	Energy Effiency Retrofits and Load Management Projects, along with New Construction Assistance. Primarily targets Lighting, HVAC, Gas Measures and Other.	Govt Buildings									
			Federal	$ -	$ -	$ -	-	-	-	0	0	0
			State	$ 6,000,000	$ -	$ 4,200,000	1,854	12,140,778	469,704	4,512	2,175	93,620
			Local	$ -	$ -	$ -	-	-	-	0	0	0
			Subtotal	$ 6,000,000	$ -	$ 4,200,000	1,854	12,140,778	469,704	4,512	2,175	93,620
			Private Buildings									
			Commercial	$ -	$ -	$ -	-	-	-	0	0	0
			Industrial	$ -	$ -	$ -	-	-	-	0	0	0
			Agricultural	$ -	$ -	$ -	-	-	-	0	0	0
			Subtotal	$ -	$ -	$ -	-	-	-	0	0	0
			Total	$ 6,000,000	$ -	$ 4,200,000	1,854	12,140,778	469,704	4,512	2,175	93,620
SDGE CA Department of Corrections Partnership	The program will offer incentives for retrofit projects, continuous commissioning, and educational training for the prisons and youth facilities.	Energy Efficiency retrofits, education, and Monitoring Based Commisioning. Primarily targets Lighting, HVAC, Gas Measures and Other.	Govt Buildings						-			
			Federal	$ -	$ -	$ -	-	-	-	0	0	0
			State	$ 1,200,000	$ -	$ 900,006	576	3,578,868	28,512	101	78	2,498
			Local	$ -	$ -	$ -	-	-	-	0	0	0
			Subtotal	$ 1,200,000	$ -	$ 900,006	576	3,578,868	28,512	101	78	2,498
			Private Buildings						-			
			Commercial	$ -	$ -	$ -	-	-	-	0	0	0
			Industrial	$ -	$ -	$ -	-	-	-	0	0	0
			Agricultural	$ -	$ -	$ -	-	-	-	0	0	0
			Subtotal	$ -	$ -	$ -	-	-	-	0	0	0
			Total	$ 1,200,000	$ -	$ 900,006	576	3,578,868	28,512	101	78	2,498
SDGE Energy Savings Bids	Local incentive program designed for large commercial or industrial energy-efficiency projects including the military and public agencies.	The targeted measure types include Lighting/Daylighting, HVAC/Refrigeration, central plant optimization via variable speed drives, and other technologies.	Govt Buildings				-	-	-			
			Federal	$ 5,840,084	$ 161,296	$ 4,240,520	2,932	19,152,593	19,315	7,201	102	102,252
			State	$ 831,046	$ 22,953	$ 603,427	761	2,725,421	5,996	1,025	32	14,791
			Local	$ 2,638,281	$ 72,866	$ 1,915,672	2,908	8,652,260	27,821	3,253	147	47,609
			Subtotal	$ 9,309,411	$ 257,115	$ 6,759,619	6,601	30,530,274	53,131	11,479	281	164,652
			Private Buildings				-	-	-			
			Commercial	$ 35,050,764	$ 968,062	$ 25,450,567	16,906	114,949,202	268,361	43,221	1,422	624,997
			Industrial	$ 5,721,076	$ 158,010	$ 4,154,107	3,617	18,762,306	39,657	7,055	210	101,706
			Agricultural	$ 862,037	$ 23,808	$ 625,930	464	2,827,056	9,851	1,063	52	15,612
			Subtotal	$ 41,633,878	$ 1,149,880	$ 30,230,605	20,987	136,538,564	317,869	51,339	1,684	742,316
			Total	$ 50,943,289	$ 1,406,995	$ 36,990,224	27,588	167,068,838	371,000	62,818	1,966	906,968
SDGE Express Efficiency Rebate Program	Statewide prescriptive rebate program that encourages nonresidential customers to retrofit existing equipment with high efficiency equipment.	The targeted measure types include Lighting, HVAC/Refrigeration, and other technologies.	Govt Buildings				-	-	-			
			Federal	$ 1,141,620	$ 172,944	$ 586,362	578	5,551,310	47,931	2,087	254	32,777
			State	$ 162,453	$ 24,610	$ 83,440	150	789,953	14,878	297	79	5,262
			Local	$ 515,731	$ 78,128	$ 264,891	574	2,507,826	69,041	943	366	18,322
			Subtotal	$ 1,819,804	$ 275,681	$ 934,693	1,302	8,849,089	131,849	3,327	699	56,361
			Private Buildings				-	-	-			
			Commercial	$ 6,851,724	$ 1,037,965	$ 3,519,203	3,334	33,317,610	665,958	12,527	3,528	224,779
			Industrial	$ 1,118,356	$ 169,419	$ 574,413	713	5,438,186	98,411	2,045	521	35,926
			Agricultural	$ 168,511	$ 25,528	$ 86,551	92	819,412	24,446	308	130	6,127
			Subtotal	$ 8,138,591	$ 1,232,912	$ 4,180,168	4,138	39,575,208	788,816	14,880	4,179	266,832
			Total	$ 9,958,395	$ 1,508,593	$ 5,114,861	5,440	48,424,297	920,665	18,208	4,878	323,193
SDGE Small Business Super Saver	Local program targeting nonresidential customers under 100kW of monthly demand and/or under an average monthly of 20,800 therms.	The targeted measure types include Lighting, HVAC/Refrigeration, and other technologies.	Govt Buildings				-	-	-			
			Federal	$ 3,547,666	$ 261,269	$ 2,319,140	2,316	17,939,838	65,781	6,745	349	99,314
			State	$ 504,834	$ 37,179	$ 330,015	601	2,552,845	20,420	960	108	14,953
			Local	$ 1,602,672	$ 118,029	$ 1,047,681	2,297	8,104,393	94,754	3,047	502	49,690
			Subtotal	$ 5,655,172	$ 416,476	$ 3,696,836	5,214	28,597,077	180,955	10,753	959	163,957
			Private Buildings				-	-	-			
			Commercial	$ 21,292,226	$ 1,568,071	$ 13,918,916	13,353	107,670,544	913,984	40,484	4,842	634,570
			Industrial	$ 3,475,372	$ 255,945	$ 2,271,881	2,857	17,574,265	135,063	6,608	716	102,529
			Agricultural	$ 523,660	$ 38,565	$ 342,321	367	2,648,045	33,550	996	178	16,428
			Subtotal	$ 25,291,259	$ 1,862,581	$ 16,533,119	16,577	127,892,854	1,082,597	48,088	5,736	753,526
			Total	$ 30,946,431	$ 2,279,057	$ 20,229,955	21,791	156,489,931	1,263,552	58,840	6,694	917,483

SDG&E 2006-2008 Energy Efficiency Programs Designed to support Green Building Initiative

Program Name	Program Description	Major Program End-Use/Services		Projected Program Budget (2006-08)	Marketing & Outreach Budget (2006-08)	Financial Incentives Budget (2006-08)	Projected Energy Savings Goals (2006-08) kw	kwh	therms	Lifecycle GHG Emmission Reduction (2006 Cumulative CO2 reduction due to kWh savings (ton) 2006-2008	Cumulative CO2 reduction due to Therm savings (ton) 2006-2008	Total Lifecycle CO2 reduction (ton)
SDGE Standard Performance Program	SPC targets mid to large-sized customers but will accommodate small non-residential customers that cannot be served by other programs.	Primarily targets Lighting, HVAC, Gas Measures and Other.	Govt Buildings				-	-	-			
			Federal	$ 1,252,769	$ 39,507	$ 812,857	482	4,172,687	25,783	1,569	137	23,877
			State	$ 178,269	$ 5,622	$ 115,670	125	593,775	8,003	223	42	3,719
			Local	$ 565,943	$ 17,847	$ 367,212	478	1,885,028	37,139	709	197	12,677
			Subtotal	$ 1,996,981	$ 62,976	$ 1,295,739	1,085	6,651,490	70,925	2,501	376	40,274
			Private Buildings				-	-	-			
			Commercial	$ 7,518,812	$ 237,111	$ 4,878,572	2,779	25,043,451	358,237	9,416	1,898	158,400
			Industrial	$ 1,227,240	$ 38,702	$ 796,293	595	4,087,657	52,938	1,537	280	25,444
			Agricultural	$ 184,917	$ 5,832	$ 119,983	76	615,918	13,150	232	70	4,218
			Subtotal	$ 8,930,970	$ 281,645	$ 5,794,849	3,450	29,747,025	424,325	11,185	2,248	188,061
			Total	$ 10,927,951	$ 344,621	$ 7,090,588	4,535	36,398,515	495,250	13,686	2,624	228,335
SDGE IOU/UC/CSU Partnership	The program will offer incentives for retrofit projects, continuous commissioning, and educational training for campus energy managers.	Primarily targets Lighting, HVAC, Gas Measures and Other.	Govt Buildings				-	-	-			
			Federal	$ -	$ -	$ -	-	-	-	0	0	0
			State	$ 6,000,000	$ -	$ 4,200,000	1,956	12,140,778	469,704	4,512	2,331	95,802
			Local	$ -	$ -	$ -	-	-	-	0	0	0
			Subtotal	$ 6,000,000	$ -	$ 4,200,000	1,956	12,140,778	469,704	4,512	2,331	95,802
			Private Buildings									
			Commercial	$ -	$ -	$ -	-	-	-	0	0	0
			Industrial	$ -	$ -	$ -	-	-	-	0	0	0
			Agricultural	$ -	$ -	$ -	-	-	-	0	0	0
			Subtotal	$ -	$ -	$ -	-	-	-	0	0	0
			Total	$ 6,000,000	$ -	$ 4,200,000	1,956	12,140,778	469,704	4,512	2,331	95,802
SDGE Savings By Design	The program promotes integrated design and emphasizes early design involvement by offering building owners and their design teams a wide range of services	The targeted measure types include Lighting/Daylighting, HVAC, Refrigeration, Water Heating, and other technologies. Systems and Whole Building approaches.	Govt Buildings				-	-	-			
			Federal	$ 1,559,082	$ 252,021	$ 741,276	659	2,365,038	18,273	889	97	13,805
			State	$ 221,858	$ 35,863	$ 105,484	171	336,546	5,672	127	30	2,192
			Local	$ 704,322	$ 113,852	$ 334,874	654	1,068,415	26,321	402	139	7,576
			Subtotal	$ 2,485,262	$ 401,736	$ 1,181,634	1,485	3,769,999	50,266	1,418	266	23,574
			Private Buildings				-	-	-			
			Commercial	$ 9,357,234	$ 1,512,571	$ 4,448,957	3,803	14,194,382	253,886	5,337	1,345	93,550
			Industrial	$ 1,527,312	$ 246,886	$ 726,170	814	2,316,844	37,518	871	199	14,979
			Agricultural	$ 230,131	$ 37,200	$ 109,417	104	349,096	9,320	131	49	2,529
			Subtotal	$ 11,114,677	$ 1,796,657	$ 5,284,545	4,721	16,860,321	300,723	6,339	1,593	111,058
			Total	$ 13,599,939	$ 2,198,392	$ 6,466,179	6,206	20,630,320	350,989	7,757	1,860	134,632
SDGE Sustainable Communities	local program designed to promote sustainable development, showcase energy-efficient design and building practices, and encourage local developers to	Incorporates high performance energy efficiency and demand reduction technologies, along with clean on-site generation, water conservation, transportation efficiencies and waste reduction strategies.	Govt Buildings									
			Federal	$ 194,293	$ 39,332	$ 96,448	48	235,496	2,113	89	11	1,396
			State	$ 27,648	$ 5,597	$ 13,725	12	33,511	656	13	3	225
			Local	$ 87,773	$ 17,768	$ 43,571	48	106,386	3,044	40	16	786
			Subtotal	$ 309,714	$ 62,697	$ 153,743	108	375,394	5,814	141	31	2,407
			Private Buildings									
			Commercial	$ 1,166,102	$ 236,061	$ 578,857	276	1,413,392	29,364	531	156	9,618
			Industrial	$ 190,334	$ 38,530	$ 94,482	59	230,697	4,339	87	23	1,536
			Agricultural	$ 28,679	$ 5,806	$ 14,236	8	34,761	1,078	13	6	263
			Subtotal	$ 1,385,116	$ 280,397	$ 687,575	343	1,678,850	34,781	631	184	11,417
			Total	$ 1,694,830	$ 343,094	$ 841,319	451	2,054,244	40,595	772	215	13,825
GRAND TOTAL				$ 131,270,835	$ 8,080,753	$ 86,033,130	70,397	458,926,569	4,409,971	171,206	22,820	2,716,355

Notes:
1) Percentage Factors used to allocate Budget and Savings into Government/Private Categories were derived from kwh consumption by SIC/NAICS codes.
2) The emissions factor for natural gas, according to EIA is 14.45 million metric tons of carbon per quadrillion Btu. (Equivalent to
3) Life Cycle CO2 reduction was calculated assuming a 14 year life.

SoCalGas Comparison

SCG 2006-2008 Energy Efficiency Programs Designed to support Green Building Initiative

Program Name	Program Description	Major Program End-Use/Services		Projected Program Budget (2006-08)	Marketing & Outreach Budget (2006-08)	Financial Incentives Budget (2006-08)	Projected Energy Savings Goals (2006-08) kw	kwh	therms	Lifecycle GHG Emmission Reduction (2006-2008) Cumulative CO2 reduction due to kWh savings (ton) 2006-2008	Cumulative CO2 reduction due to Therm savings (ton) 2006-2008	Total Lifecycle CO2 reduction (ton)
SCG Express Efficiency Rebate Program	Program that encourages nonresidential customers to retrofit existing equipment with high efficiency equipment.	The targeted measure types include water and space heating retrofits, and other technologies.	Govt Buildings									
			Federal	$ 87,012	$ 19,177	$ 36,350	-	-	44,804	0	237	3,323
			State	$ 175,509	$ 38,681	$ 73,320	-	-	90,373	0	479	6,703
			Local	$ 3,101,433	$ 683,540	$ 1,295,642	-	-	1,596,982	0	8,461	118,451
			Subtotal	$ 3,363,954	$ 741,399	$ 1,405,311	-	-	1,732,158	0	9,177	128,478
			Private Buildings				-	-	-			
			Commercial	$ 2,983,468	$ 657,542	$ 1,246,361	-	-	1,536,239	0	8,139	113,946
			Industrial	$ 15,381,264	$ 3,389,955	$ 6,425,612	-	-	7,920,079	0	41,961	587,448
			Agricultural	$ 372,551	$ 82,108	$ 155,635	-	-	191,833	0	1,016	14,229
			Subtotal	$ 18,737,283	$ 4,129,605	$ 7,827,609	-	-	9,648,152	0	51,116	715,623
			Total	$ 22,101,237	$ 4,871,004	$ 9,232,920	-	-	11,380,310	0	60,293	844,100
SCG Local Business Energy Efficiency Program	Targets all nonresidential customers, including commercial, industrial and agricultural customers.	Program consists of prescriptive Efficient Equipment Rebates, Process Equipment Replacement incentives, Custom Process Improvement Incentives, Grant and Recognition programs. The targeted	Govt Buildings				-	-	-			
			Federal	$ 105,696	$ 6,601	$ 56,992	-	-	70,735	0	375	5,247
			State	$ 213,195	$ 13,314	$ 114,956	-	-	142,676	0	756	10,583
			Local	$ 3,767,390	$ 235,273	$ 2,031,395	-	-	2,521,246	0	13,358	187,006
			Subtotal	$ 4,086,281	$ 255,188	$ 2,203,343	-	-	2,734,657	0	14,488	202,835
			Private Buildings				-	-	-			
			Commercial	$ 3,624,095	$ 226,325	$ 1,954,130	-	-	2,425,349	0	12,849	179,893
			Industrial	$ 18,684,016	$ 1,166,816	$ 10,074,512	-	-	12,503,881	0	66,246	927,438
			Agricultural	$ 452,547	$ 28,262	$ 244,016	-	-	302,858	0	1,605	22,464
			Subtotal	$ 22,760,659	$ 1,421,402	$ 12,272,657	-	-	15,232,087	0	80,700	1,129,794
			Total	$ 26,846,940	$ 1,676,590	$ 14,476,000	-	-	17,966,744	0	95,188	1,332,629
SCG Savings By Design SCG SCE Program	Through this joint program SoCalGas will offer incentives for gas energy savings	The targeted measure types include Space heating, Water Heating, and other technologies. Systems and Whole Building approaches.	Govt Buildings				-	-	-			
			Federal	$ 29,527	$ 5,473	$ 12,177	-	-	20,746	0	110	1,539
			State	$ 59,558	$ 11,040	$ 24,561	-	-	41,846	0	222	3,104
			Local	$ 1,052,464	$ 195,080	$ 434,021	-	-	739,469	0	3,918	54,848
			Subtotal	$ 1,141,549	$ 211,593	$ 470,759	-	-	802,062	0	4,249	59,491
			Private Buildings				-	-	-			
			Commercial	$ 1,012,432	$ 187,660	$ 417,513	-	-	711,343	0	3,769	52,762
			Industrial	$ 5,219,594	$ 967,482	$ 2,152,486	-	-	3,667,328	0	19,430	272,013
			Agricultural	$ 126,424	$ 23,433	$ 52,136	-	-	88,827	0	471	6,588
			Subtotal	$ 6,358,451	$ 1,178,575	$ 2,622,135	-	-	4,467,498	0	23,669	331,363
			Total	$ 7,500,000	$ 1,390,168	$ 3,092,893	-	-	5,269,560	0	27,918	390,854
SCG Savings By Design SCG Muni Program	Through this joint program SoCalGas will offer incentives for gas energy savings	The targeted measure types include Space heating, Water Heating, and other technologies. Systems and Whole Building approaches.	Govt Buildings				-	-	-			
			Federal	$ 11,811	$ 1,190	$ 7,087	-	-	11,811	0	63	876
			State	$ 23,823	$ 2,401	$ 14,294	-	-	23,823	0	126	1,767
			Local	$ 420,985	$ 42,433	$ 252,591	-	-	420,985	0	2,230	31,225
			Subtotal	$ 456,620	$ 46,024	$ 273,972	-	-	456,620	0	2,419	33,868
			Private Buildings				-	-	-			
			Commercial	$ 404,973	$ 40,819	$ 242,984	-	-	404,973	0	2,146	30,038
			Industrial	$ 2,087,838	$ 210,441	$ 1,252,702	-	-	2,087,838	0	11,061	154,859
			Agricultural	$ 50,570	$ 5,097	$ 30,342	-	-	50,570	0	268	3,751
			Subtotal	$ 2,543,380	$ 256,356	$ 1,526,027	-	-	2,543,380	0	13,475	188,648
			Total	$ 3,000,000	$ 302,381	$ 1,799,999	-	-	3,000,000	0	15,894	222,516
SCG Sustainable Communities Demo/City of San	local program designed to promote sustainable development, showcase energy-efficient design and building practices, and encourage local developers to incorporate clean on-	Incorporates high performance energy efficiency and demand reduction technologies, along with clean on-site generation, water conservation, transportation efficiencies and waste reduction strategies.	Govt Buildings				-	-	-			
			Federal	$ 3,543	$ 1,106	$ 512	-	-	22	0	0	2
			State	$ 7,147	$ 2,232	$ 1,032	-	-	44	0	0	3
			Local	$ 126,296	$ 39,439	$ 18,243	-	-	772	0	4	57
			Subtotal	$ 136,986	$ 42,777	$ 19,787	-	-	837	0	4	62
			Private Buildings				-	-	-			
			Commercial	$ 121,492	$ 37,939	$ 17,549	-	-	742	0	4	55
			Industrial	$ 626,351	$ 195,593	$ 90,473	-	-	3,828	0	20	284
			Agricultural	$ 15,171	$ 4,737	$ 2,191	-	-	93	0	0	7
			Subtotal	$ 763,014	$ 238,269	$ 110,213	-	-	4,663	0	25	346
			Total	$ 900,000	$ 281,047	$ 130,000	-	-	5,500	0	29	408
GRAND TOTAL				$ 60,348,177	$ 8,521,189	$ 28,731,812	-	-	37,622,114	0	199,322	2,790,507

Notes:
1) Percentage Factors used to allocate Budget and Savings into Government/Private Categories were derived from kwh
2) The emissions factor for natural gas, according to EIA is 14.45 million metric tons of carbon per quadrillion Btu. (Equivalent to
3) Partnerships for 2006-2008 were not included in this analysis. SCG did not forecast savings for partnerships in the June 1st,

Attachment B: Revised Joint IOU Projection of Savings from 2006-2008 portfolios (Submitted July 6, 2006)

REVISED Joint Utilities Report

Joint Utilities Report Comparing Best Estimates of Forecasted Savings Over the 2006-2008 Energy Efficiency Program Cycle with the 20% Reduction Goal of the Green Building Initiative (In Response to Ordering Paragraph 5 of the May 24, 2006 Assigned Commissioner's Ruling and Scoping Memo and Notice of Phase I Workshop on Risk/Return Incentive Mechanism)

	GBI RELATED PROGRAMS -COMMERCIAL & INSTITUTIONAL BUILDINGS (2006-2008)				
		Projected Energy Savings		GHG Emission Reduction	
Utility	Total Budget	MW	GWH	Annual CO2 Reduction due to kwh savings (ton)	Total Lifecycle CO2 reduction (ton)
PG&E	$ 148,160,951	130	537	151,271	2,256,954
SCE	$ 226,006,708	292	1,166	641,518	8,621,646
SDG&E	$ 116,013,208	61	403	150,261	2,389,059
TOTAL	$ 490,180,867	482	2,106	943,050	13,267,660
GBI 20% Target		3,984	17,706		
2006-2008 Utility Target as % of GBI		12%	12%		

NARRATIVE:

The Commercial & Institutional Buildings table reflects the current California investor-owned utilities' forecast of new energy efficiency installations for all private commercial buildings as well as local, state and federal-owned buildings during 2006-8. These new forecasted energy efficiency impacts plan to be met by a variety of energy efficiency program strategies such as hardwired installations, commissioning, retro-commissioning and improved efficiency design. These strategies will offer a combination of incentives and technical assistance to optimize the performance of these facilities. Specific program offerings will include such programs as Standard Performance Contract, Comprehensive Package Air Conditioning, Business Incentives, Savings By Design and Retrocommissioning. Note: Commercial & Institutional Buildings includes all private commercial, federal, state and local. Does not include residential, agricultural or industrial.

	GBI RELATED PROGRAMS - STATE BUILDINGS ONLY (2006-2008)				
		Projected Energy Savings		GHG Emission Reduction	
Utility	**Total Budget**	**MW**	**GWH**	**Annual CO2 Reduction due to kwh savings (ton)**	**Total Lifecycle CO2 reduction (ton)**
PG&E	$ 12,705,961	10	50	19,736	320,214
SCE	$ 17,967,045	9	54	29,656	436,846
SDG&E	$ 15,126,109	6	35	11,769	233,061
TOTAL	$ 45,799,115	25	138	61,161	990,122
GBI 20% Target		**120**	**531**		
2006-2008 Utility Target as % of GBI		**21%**	**26%**		

NARRATIVE: The State Buildings table reflects the current California investor-owned utilities' forecast of new energy efficiency installations and supporting activities for all state commercial buildings during 2006-8. These new forecasted energy efficiency impacts plan to be met by a variety of energy efficiency program strategies such as hardwired installations, commissioning, retro-commissioning and improved efficiency design. These strategies will offer a combination of incentives and technical assistance to optimize the performance of these facilities. Specific program offerings will include such programs as Standard Performance Contract, Comprehensive Package Air Conditioning, Business Incentives, Savings By Design and Retrocommissioning.

Note: State Buildings includes state buildings only. Does not include federal, local, private commercial, residential, agricultural or industrial.

	GBI RELATED PROGRAMS - COMMERCIAL BUILDINGS ONLY (2006-2008)				
		Projected Energy Savings		GHG Emission Reduction	
Utility	Total Budget	MW	GWH	Annual CO2 Reduction due to kwh savings (ton)	Total Lifecycle CO2 reduction (ton)
PG&E	$106,412,982	95	378	151,271	2,256,954
SCE	$153,656,984	236	943	518,707	6,901,612
SDG&E	$81,236,863	40	297	111,517	1,745,915
TOTAL	$341,306,828	371	1,617	781,496	10,904,482
GBI 20% Target		**3,586**	**15,935**		
2006-2008 Utility Target as % of GBI		**10%**	**10%**		

NARRATIVE: The Commercial Buildings table reflects the current California investor-owned utilities' forecast of new energy efficiency installations and supporting activities for all private commercial buildings during 2006-8. These new forecasted energy efficiency impacts plan to be met by a variety of energy efficiency program strategies such as hardwired installations, commissioning, retro-commissioning and improved efficiency design. These strategies will offer a combination of incentives and technical assistance to optimize the performance of these facilities. Specific program offerings will include such programs as Standard Performance Contract, Comprehensive Package Air Conditioning, Business Incentives, Savings By Design and Retrocommissioning.

Note: Commercial Buildings includes all private commercial buildings only. Does not include state, federal, local, residential, agricultural or industrial.

	GBI RELATED PROGRAMS - OTHER PUBLIC BUILDINGS ONLY (2006-2008)				
		Projected Energy Savings		GHG Emission Reduction	
Utility	Total Budget	MW	GWH	Annual CO2 Reduction due to kwh savings (ton)	Total Lifecycle CO2 reduction (ton)
PG&E	$29,042,009	25	109	44,177	691,161
SCE	$54,382,679	47	169	93,154	1,283,188
SDG&E	$19,650,236	14	72	26,975	410,083
TOTAL	$103,074,924	86	350	164,306	2,384,431
GBI 20% Target		**279**	**1,239**		
2006-2008 Utility Target as % of GBI		**31%**	**28%**		

NARRATIVE: The Other Public Buildings table reflects the current California investor-owned utilities' forecast of new energy efficiency installations and supporting activities for all federal and local commercial buildings during 2006-8. These new forecasted energy efficiency impacts plan to be met by a variety of energy efficiency program strategies such as hardwired installations, commissioning, retro-commissioning and improved efficiency design. These strategies will offer a combination of incentives and technical assistance to optimize the performance of these facilities. Specific program offerings will include such programs as Standard Performance Contract, Comprehensive Package Air Conditioning, Business Incentives, Savings By Design and Retrocommissioning.

Note: Other Public Buildings includes all federal and local buildings only. Does not include state, private commercial, residential, agricultural or industrial.

PG&E Notes:
1. The projected energy savings goals are derived from Attachment 5, Joint IOU Case Management Statement, July 18. 2005 and updated according to PG&E's April 14, 2006 supplement compliance filing.
2. The projected program budgets include marketing & outreach and financial incentives and are based on the savings percentage established in the Joint IOU Case Management Statement.
The proposed EM&V budget costs were at the portfolio level and are therefore excluded. Financial incentives are incentives paid to participants.
3. The estimated allocation percentage of projected budgets and energy savings goals for the government and private buildings are derived from the percentage amount of financial incentives for participants in PY 2004.

SCE Notes:
1. Projected energy savings are based on SCE's 2006-08 Compliance Filing, dated January 6, 2006 (including an updates to load impact assumptions since filing) using 2004 as a basis for expected participation by customer segments.
2. The projected program budgets include marketing & outreach and financial incentives and are based on SCE's 2006-08 Compliance Filing, dated January 6, 2006 using 2004 as a basis for expected participation by customer segments.
SDG&E Notes:
1) Percentage Factors used to allocate Budget and Savings into Government/Private Categories were derived from kwh consumption by SIC/NAICS codes.
2) The projected program budgets include both marketing & outreach and financial incentives.
3) The emissions factor for natural gas, according to EIA is 14.45 million metric tons of carbon per quadrillion Btu. (Equivalent to 5298 metric tons of CO2 per million therms or .005298 metric tons of CO2 per therm.) (Source: Energy Information Administration, “Emissions of Greenhouse Gases in the United States 1987-1992,” DOE/EIA-0573 (Washington, DC, November 1994), Appendix A, pp. 73-92, www.eia.doe.gov/oiaf/1605/87-92rpt/appa.html). The corresponding electric emission rate, using this heat rate and emissions factor, is 376 metric tons CO2 / GWh or .000376 metric tons CO2/kWh.
4) Life Cycle CO2 reduction was calculated assuming a 14 year measure life.

Attachment C: GBI Reported Savings Data submitted by IOUs[34]

CA IOUs

2006-2008 Green Building Initiative (GBI) Report

Summary of 2004 - Q2 2007 Progress

GBI Goal and Results

		Summer Peak (kW, net)	Energy Savings (kWh, net)	Gas Savings (Therms, Net)
State Buildings	**Expenditures (4)**	**kW Installed**	**kWh Installed**	**Therms Installed**
Quarterly Totals (1)	$571,617	250	1,202,509	658
Current Program Cycle (2)	$2,419,172	856	4,268,566	15,702
Total Since Inception (3)	$6,038,159	4,478	23,829,129	725,971
2006-2008 Utility Target	-	27,246	138,373,505	1,741,935
2006-2008 Utility Target: % Fulfilled	-	3.14%	3.08%	0.90%
Commercial Buildings				
Quarterly Totals (1)	$22,828,422	23,802	131,194,694	2,307,140
Current Program Cycle (2)	$92,658,716	96,694	562,452,783	8,455,872
Total Since Inception (3)	$193,656,211	305,467	1,813,156,694	18,418,668
2006-2008 Utility Target	-	679,995	2,324,180,655	7,569,722
2006-2008 Utility Target: % Fulfilled	-	14.22%	24.20%	111.71%
Other Public Buildings Only				
Quarterly Totals (1)	$1,458,519	2,141	5,919,764	35,737
Current Program Cycle (2)	$9,017,869	12,126	37,316,875	325,489
Total Since Inception (3)	$25,551,232	32,746	145,246,495	5,354,834
2006-2008 Utility Target	-	93,395	350,231,107	7,355,577
2006-2008 Utility Target: % Fulfilled	-	12.98%	10.65%	4.43%
Commercial & Institutional (All)				
Quarterly Totals (1)	$24,858,559	26,194	138,316,967	2,343,535
Current Program Cycle (2)	$104,095,756	109,676	604,038,224	8,797,063
Total Since Inception (3)	$225,245,601	342,692	1,982,232,318	24,499,473
2006-2008 Utility Target	-	800,636	2,812,785,267	16,667,234
2006-2008 Utility Target: % Fulfilled	-	13.70%	21.47%	52.78%

Notes: (1) 2007 - 2nd Quarter; (2) Jan 2006 thru June 2007; (3) Jan 2004 thru June 2007; (4) Incentives to participants only.

[34] This data is updated on a quarterly basis and can be found at http://eega2006.cpuc.ca.gov/Default.aspx

GBI Results by NAICS Code

	Square Footage	Summer Peak (kW, net)		Energy Savings (kWh, net)		Gas Savings (Net Annual Therms)	
Commercial & Institutional Buildings	Total Installed (inception to date)	Total Installed (inception to date)	Total Installed (Report Quarter)	Total Installed (inception to date)	Total Installed (Report Quarter)	Total Installed (inception to date)	Total Installed (Report Quarter)
Nonresidential							
42	TBD	26,501	1,919	114,390,558	9,745,589	291,293	540
44	TBD	67,532	5,242	405,809,454	29,608,086	549,592	29,572
45	TBD	28,423	2,363	148,499,611	9,616,238	113,749	2,194
49	TBD	24,118	769	144,040,994	3,791,222	257,660	99,456
51	TBD	6,288	339	38,253,558	1,421,124	128,077	1,620
52	TBD	3,440	274	14,754,871	999,713	103,763	(1)
53	TBD	30,979	2,530	171,930,514	12,255,456	508,586	5,096
54	TBD	8,677	749	54,880,895	3,100,891	1,323,221	164
55	TBD	3,817	95	15,650,912	402,641	535,558	-
56	TBD	1,703	255	8,350,372	1,148,605	30,055	45
61	TBD	37,823	2,319	134,172,109	6,032,321	2,971,465	56,595
62	TBD	22,200	1,682	157,215,562	11,016,385	1,090,816	4,319
71	TBD	10,832	564	62,068,907	3,470,798	335,477	5,632
72	TBD	46,718	4,369	393,213,846	32,501,839	4,412,840	74,254
81	TBD	14,686	2,418	71,601,760	11,873,401	11,368,122	2,061,242
92	TBD	8,954	307	47,532,301	1,332,659	479,199	2,807
Total		342,692	26,194	1,982,366,222	138,316,967	24,499,473	2,343,535

GBI Results by End Use Classification

Total	Square Footage	Summer Peak (kW, net)		Energy Savings (kWh, net)		Gas Savings (Net Annual Therms)	
	Total Installed (inception to date)	Total Installed (inception to date)	Total Installed (Report Quarter)	Total Installed (inception to date)	Total Installed (Report Quarter)	Total Installed (inception to date)	Total Installed (Report Quarter)
Nonresidential							
HVAC	TBD	47,736	3,148	285,912,860	9,698,609	8,834,518	190,508
Lighting	TBD	212,113	17,085	1,163,165,913	93,317,729	(21,715)	-
Office	TBD	0	-	109,271	-	-	-
Process	TBD	6,287	972	42,489,099	2,375,130	12,674,503	2,125,696
Refrigeration	TBD	16,696	2,066	152,205,819	18,794,896	641	(162)
Other	TBD	59,861	2,923	338,349,356	14,130,603	3,011,526	27,493
Total	TBD	342,692	26,194	1,982,232,318	138,316,967	24,499,473	2,343,535

Attachment D: IOU Reported Savings – Additional Data Presentation

NAICS and CPUC GBI data collection

Another useful method of determining what types of customers are responsible for the greatest savings toward GBI goals is to stratify the data by each customer's industry classification code. In the past, SIC (Standard Industrial Classification) codes were most widely used for classification of economic data by the federal government. SIC codes were replaced by NAICS (North American Industry Classification System) codes by the federal Office of Management and Budget in 1997. Currently a period of transition exists as the government attempts to collect and organize all of its industrial statistics using NAICS. It is useful within energy efficiency to have the ability to identify which types of commercial and industrial customers are pursuing energy efficiency and which may hold untapped reserves for future targeting. Also, it is important for those evaluating the success of the GBI to use NAICS codes to organize achievements across all demand side measures used to reduce energy purchases from the grid so that aggregation across programs can occur.[35]

Sectors included:

42 - The Wholesale Trade sector

44-45 - The Retail Trade sector

49 (491-Postal, 492-Courior, 493- Warehousing sector)

51 - The Information sector

52 - The Finance and Insurance sector

53 - The Real Estate and Rental and Leasing sector

54 - The Professional, Scientific, and Technical Services sector

55 - The Management of Companies and Enterprises sector

56 - The Administrative and Support and Waste Management and Remediation Services sector

61 - The Educational Services sector

[35] Commercial customers as defined by one IOU may be defined differently by another IOU. In addition, the tracking mechanisms for distributed generation programs run by different state agencies may differ slightly. Use of NAICS to determine which savings "count" toward GBI goals and which sectors are responsible for those savings offers a useful data processing tool.

62 - The Health Care and Social Assistance sector

71 - The Arts, Entertainment, and Recreation sector

72 - The Accommodation and Food Services sector

81 (811-813) - The Other Services (except Public Administration) sector (814 includes private residences operated as businesses and is excluded from the GBI)

92 - The Public Administration sector

Sectors not included:

11 - The Agriculture, Forestry, Fishing and Hunting sector

21 - The Mining sector

22 - The Utilities sector

23 - The Construction sector

31-33 - The Manufacturing sector

48 - The Transportation sector

Organizational Reasoning

The sectors from which energy savings do not count toward GBI goals are those traditionally described as industrial or residential. For these purposes, an industrial sector was defined as any sector that extracted resources, or processed those resources into products.[36] The GBI was written to include only commercial and institutional accounts. Although it was described what entities fell into these categories in the Green Building Action Plan[37], it is not possible to rely on IOUs account type or CEC Building Codes as a method of classification. Furthermore, much of the energy efficiency savings or renewable self generation data is not organized to accommodate the GBI's narrow scope. NAICS codes are organized by production or service process and are routinely collected during the process of receiving IOU assistance.

[36] The Transportation sector was excluded because electricity generated or saved by the buildings associated could not be separated from the electricity used by transportation services.

[37] The Green Building Action Plan was issued in September 2004, and listed the commercial and institutional sector as including Offices, Food Stores, Hospitals, Retail Stores, Warehouses, Restaurants, Hotels, Schools, Colleges, and other Miscellaneous Commercial buildings.

Table A1: GBI Savings Stratified by NAICS Code: Program Cycle 2004-2005 and 2006-2008*

Commercial Sector Classification	NAICS Code	MW (Reported)	GWh (Reported)	Million Therms (Reported)
Wholesale Trade	42	27	114	0.3
Retail Trade (A)	44	68	406	0.5
Retail Trade (B)	45	28	148	0.1
Postal, Courier, & Warehousing sector (491-493)	49	24	144	0.3
Information	51	6	38	0.1
Finance and Insurance	52	3	15	0.1
Real Estate, Rental and Leasing	53	31	172	0.5
Professional, Scientific, and Technical Services	54	9	55	1.3
Management of Companies and Enterprises	55	4	16	0.5
Administrative, Support, and Waste Management/Remediation Services	56	2	8	0.0
Educational Services	61	38	134	3.0
Health Care and Social Assistance	62	22	157	1.1
Arts, Entertainment, and Recreation	71	11	62	0.3
Accommodation and Food Services	72	47	393	4.4
Other Services (811-813)	81	15	72	11.4
Public Administration	92	9	48	0.5
Total		343	1,982	24

* Reported figures for the 2006-2008 Program Cycle only include reported accomplishments from 2006 through the Second Quarter (June) 2007
This data was organized by the IOUs and submitted as the Q2 IOU Quarterly Report to the Energy Efficiency Groupware Application (http://eega2006.cpuc.ca.gov)

Table A1 provides a new view into the makeup of energy efficiency savings contributing to GBI. This snapshot identifies the sectors which have participated the most in IOU voluntary programs but may not indicate which have the most existing potential to tap. A time series chart incorporating the disaggregated data across each quarter could help to identify trends in energy efficiency savings and identify well tapped sources where best practices may be relevant for distribution.

The brief description of the sectors above provide an indication of what types of end uses may be the source of newly generated savings. However, the primary end uses for Retail Trade (44-45), Educational Services (61), and Public Administration may be very similar. Trends in end use savings are important to track as well as they can provide additional information to IOUs and policy makers about the saturation of certain measures in certain sectors. Table A2 organizes the data by six common end use descriptions. Further refinement to the measure level may be desirable, but presents data handling complications as there are hundreds of measures within each of the end

use descriptions listed below. Currently lighting end use savings represent the large majority of savings associated with GBI programs.

Table A2: End Use Savings: Program Cycles 2004-2005 and 2006-2008*

	MW (Reported)	GWh (Reported)	Million Therms (Reported)
HVAC	48	286	9
Lighting	212	1,163	(0.022)
Office	0	0	0.0
Process	6	42	13
Refrigeration	17	152	0.001
Other	60	338	3
Total	343	1,982	24

* Reported figures for the 2006-2008 Program Cycle only include reported accomplishments from 2006 through the Second Quarter (June) 2007
This data was organized by the IOUs and submitted as the Q2 IOU Quarterly Report to the Energy Efficiency Groupware Application (http://eega2006.cpuc.ca.gov)